Groundwater Monitoring 2021–2023 & Additional Site Characterization Report

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

Prepared for

Bud Clary Auto Group
1030 Commerce Avenue
Longview, WA 98632

Prepared by

Blue Sage Environmental, Inc.
198007 E 30th Ave
Kennewick, Washington 99337

July 15, 2023

July 15, 2023

Joseph Kasperski, Southwest Region TCP
Washington State Department of Ecology
PO Box 47775
Olympia, WA 98504-7775

Subject: Request for No Further Action Using Model Remedies Option 2, F/S 34656, VCP SW1706, Bud Clary Subaru

Dear Mr. Kasperski:

This Site Investigation and Interim Remedial Cleanup Action (IRCA) report includes the results of recent explorations of soil and groundwater. Two separate cleanup actions were completed in August 2018. The identified area of petroleum hydrocarbon contamination in soil above the water table was removed by excavation. Remaining soil contamination below the level of groundwater was then treated in-situ using conditioned activated carbon and biological remediation agents.

The IRCA is an intermediate step in Ecology's Model Toxics Control Act cleanup strategy. The process of monitoring the biological process in groundwater and soil is documented in this report. Site conditions comply with the requirements Model Remedies, Option 2, Method A – Unrestricted.

We trust the information presented in this report meets your needs at this time. Should you require additional information or have any questions, please contact us at your convenience.

Sincerely,
Blue Sage Environmental, Inc.

Alexander H. Koch
Project Manager

State of Washington
Hydrogeologist
394
Licensed Geologist
Carol A. Johnston

Carol A. Johnston, LHG
Senior Hydrogeologist

Blue Sage Environmental, Inc. | 198007 E. 30th Avenue | Kennewick, WA 99337 | (509) 947-4059
Email: akoch1967@yahoo.com

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ACRONYMS AND ABBREVIATIONS

AAS	Applied Analytical Services NW
AS	air sparge
ARAR	Applicable or Relevant and Appropriate Requirement
BSE	Blue Sage Environmental, Inc.
CAA	Cleanup Action Alternatives
CAP	Cleanup Action Plan
CCS	Cowlitz Clean Sweep, Inc.
cPAH	Carcinogenic Polycyclic Aromatic Hydrocarbons
CUL	Cleanup Levels
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DCA	Disproportionate Cost Analysis
ECOLOGY	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
EPI	Environmental Partners, Inc.
ESN	ESN Northwest, Inc.
FS	Feasibility Study
GCI	Geotech Consultants, Inc.
GRO	Gasoline Range Organics
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
MTCA	Washington State Model Toxics Control Act
NFA	No Further Action
OSHA	Occupational Safety and Health Act
PCB	Polychlorinated Biphenyl
POC	Points of Compliance
RCRA	Resource Conservation Recovery Act
REC	Recognized Environmental Condition
RI	Remedial Investigation
ROW	Right-of-Way
SEPA	State Environmental Policy Act

SITE	Soil, soil-vapor, surface water and/or groundwater contaminated with petroleum hydrocarbons.
SVE	Soil Vapor Extraction
TEE	Terrestrial Ecological Evaluation
TPH	Total Petroleum Hydrocarbons
USGS	U.S. Geological Survey
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound
WISHA	Washington Industrial Health and Safety Act
WAC	Washington Administrative Code

1.0 INTRODUCTION

This report for the Bud Clary Subaru facility in Longview, Washington, hereafter referred to as the Site, has been completed for the Bud Clary Auto Group (BCAG). The purpose of site investigations and groundwater monitoring is to characterize the nature and extent of site contamination, and to design, evaluate, and monitor interim cleanup actions. This work is being carried out following the Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA), WAC 173-340. More specifically, this Site is being managed as an independent cleanup pursuant to WAC 173-340-515.

1.1 General Site Information

Site Property Address:

Bud Clary Subaru
961 Commerce Avenue
Longview Washington 98632
Cowlitz County Parcel # R032964
ERTS ID #683551
VCP SW1706

Site Owner:

Bud Clary Auto Group (BCAG)
1030 Commerce Avenue
Longview Washington 98632
(360) 560-1700
Kelly and Bryce Clary, Principals

Legal Description:
SUB: AP 16 BLK:90 LOT:1,2,3, LOT:3A,4 DESC: WLY 50 FT LOT 3 SEC,TWN,RNG:33-8N-2W PARCEL: 09278

Latitude: 47.13138 Longitude: -122.93694

Site Consultant:

Blue Sage Environmental, Inc. (BSE)
198007 E 30th Avenue
Kennewick, WA 99337
Alexander H Koch, Project Manager (509) 947-4059

1.2 Site Description and History

The Site is a 24,000 square foot commercial parcel in Longview, Washington. It is an active car dealership, Bud Clary Subaru. Jim Clary, BCAG, purchased the property in 1987. Previous to that time, it had been a Datsun dealership. The purchase included a 10,000 square foot showroom and vehicle service building.

The Site is located in a commercial and retail area of Longview, with other auto dealerships, businesses, and the offices of the Cowlitz County Public Utilities Division

located nearby (***Figure 1***). In early 2018, the original building was demolished to make way for the construction of a new showroom. This site redevelopment initiated a cycle of site investigations, remedial excavations, and other cleanup actions.

1.3 Site Use

Following construction of the new showroom and service building in spring 2019, the Site continues to be utilized as a car dealership.

1.4 Regional Geology

Geologic information for the Site was obtained from a Washington State Department of Natural Resources Geological Map of Washington State by J. Eric Schuster, 2005. According to the geological map, the City of Longview is located in an area predominately Quaternary Alluvium that was transported and deposited by the Columbia and Cowlitz Rivers. Alluvium consists of mostly unconsolidated silt, sand, and gravel with some clay. The alluvium ranges from loose to medium density and may contain interbedding of marsh, peat, artificial fill, and glacial deposits. This soil description is consistent with the lithology observed during the subsurface investigation.

Groundwater at the Site is typically encountered at relatively shallow depths. Based on Site monitoring wells, the depth to groundwater across the Site has ranges seasonally from 7.3 to 9.3 feet below ground surface (bgs). Groundwater direction is interpreted to be typically west or west-northwest across the area.

Drinking water from the City of Longview has been typically supplied from the Cowlitz River treated by the Regional Water Treatment Plan (RWTP). Concerns about changing water quality in the Cowlitz River and aging components at the RWTP prompted the development of a new treatment plan, the Mint Farm Regional Water Treatment Plan (MFRWTP). The MFRWTP is located approximately 2.5 miles west of the Site. The Site is located outside the Mint Farm Wellhead Protection Area (WHPA).

2.0 PREVIOUS INVESTIGATIONS AND EXCAVATION

2.1 Geotechnical Investigations (Geotech Consultants, Inc.)

As part of the geotechnical engineering studies for the new showroom and service center, Geotech Consultants, Inc. completed a series of exploratory borings across the Site on April 12 and 13, 2018. Petroleum contaminated soil was encountered in Boring B-2. Geotech's site map and boring log can be found in ***Appendix A***. This discovery triggered the need for further site investigation.

2.2 Test Hole Sampling (Cowlitz Clean Sweep, Inc.)

On April 23, 2018, Cowlitz Clean Sweep, Inc. (CCS), a division of PNE Corporation of Longview, Washington, completed several backhoe test holes across the north end of the Site. Petroleum odor in the soil and oily sludge were observed in subsurface locations. Material from the test holes was placed in a 55-gallon drum. A composite sample was obtained of the soil/sludge mixture on April 24, 2018, and submitted to APEX Laboratories, LLC (APEX) in Kelso, WA. It was analyzed for diesel and lube oil range organics, gasoline range organics, volatile organic compounds (VOC), carcinogenic polycyclic aromatic hydrocarbons (cPAH), and RCRA 8 heavy metals. Detected concentrations of lube oil (5,280 mg/kg) and gasoline (215 mg/kg), exceeded their respective MTCA Method A Cleanup Levels (CUL) in the sample. VOC and cPAH concentrations were either below CULs or not detected at the laboratory reporting limit. Heavy metals (total) were also detected, but below their CULs (BSE 2019).

2.3 Exploratory and Remedial Excavation (CCS)

During the week of July 16th, 2018, CCS began an exploratory excavation in the northwest corner of the property. The location of the excavation was at the north end of dealership showroom building which was demolished the week of July 9th, 2018. CCS removed approximately 45 tons of petroleum contaminated soil, tires, oil filters and oily debris down to a depth approximately ten feet below ground surface (bgs). Groundwater was encountered at this depth. The source of the contamination remains unknown. However, it is suspected that it was present prior to Jim Clary purchasing the property as it was under the existing building. 45 tons of excavated contaminated soil and debris were transported to the Cowlitz County Landfill for disposal.

Excavation activity was halted when it became apparent petroleum contamination was not localized but extended over a larger area than originally estimated. Seven soil samples were collected on July 19, 2018, from the excavated area (***Figure 2***). Depths of

each soil sample was not recorded. These soil samples were sent to Libby Environmental, Inc. (Libby) in Olympia and analyzed for diesel/lube oil and select samples analyzed for polychlorinated biphenyls (PCB).

CCS Excavation Area Soil Samples – July 19, 2018

Sample #	Diesel	Lube Oil (mg/kg)	PCB (mg/kg)
Spot 1	<50	<250	<0.1
Spot 2	<50	<250	<0.1
Spot 3	<50	<250	<0.1
S2, NW	<50	**13,000 E**	na
S2N-Mid	<50	**15,000 E**	na
S2, NE	<50	**873**	na
S2-NW-A	<50	**21,000 E**	na
MTCA CUL	2,000	2,000	1.0

Notes:
E – Result is an estimate, exceeded calibration range
873 – Black bold number indicates contaminant detected
21,000 - Red bold number indicates contaminant exceeds MCTA CUL
na Analyte not tested

Although no formal documentation of sample locations was provided by CCS, the analytical results generally confirmed a wider spread of petroleum contamination than originally discovered by earlier soil sampling. PCBs were not found in these samples.

2.4 Site Investigation July 2018

CCS contracted with environmental service providers to begin characterization of the Site. Environmental Partners, Inc. (EPI) of Issaquah, Washington provided consulting services. ESN-Northwest (ESN) of Olympia, Washington provided direct-push (i.e., Geoprobe) subsurface sampling. Libby provided on-site laboratory services. From July 23 through July 31, 2018, EPI advanced forty-three borings across the Site (*Figure 2*). Soil samples were collected from various depths in each boring. Samples were analyzed for diesel/lube oil, gasoline, and BTEX. Concentrations of lube oil and gasoline in soil were detected in borings SB-4, SB-7, SB-8, SB-9, SB-12, SB-14, and SB-15. Concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) were either not detected at laboratory reporting limits or were below their CUL.

EPI Soil Sample Analytical Results

Sample #	Depth (ft)	Diesel (mg/kg)	Lube Oil (mg/kg)	Gasoline (mg/kg)
SB-4	8	<50	**590**	**600** E
SB-4	12	<50	<250	**29**
SB-6	12	<50	**1,850**	**61**
SB-7	170	<50	**3,660**	**170**
SB-8	8	<50	**16,000**	**290** E
SB-8	12	<50	**3,010**	na
SB-9	10	<50	<250	**60**
SB-12	6	<50	**12,400**	**640 E**
SB-12	8	<50	**4,380**	na
SB-14	8	<50	**16,600**	na
SB-14	12	<50	**22,700**	**750** E
SB-14	16	<50	**380**	--
SB-15	8	<50	**34,800**	--
SB-15	10	<50	**20,000** E	**740** E
SB-15	14	<50	**560**	--
MTCA CUL		*2,000*	*2,000*	*30/100*

Notes:
E **R**esult is an estimate, exceeded calibration range
873 Black bold number indicates contaminant detected
21,000 Red bold number indicates contaminant exceeds MCTA CUL
na Analyte not tested

The soil sample from boring SB-35 was analyzed for PCBs. PCB compounds were not detected at the laboratory reporting limits. (BSE 2019).

The investigation confirmed diesel/lube oil and gasoline contamination in soil and groundwater across the northern portion of the property. A summary of the EPI analytical results for soils can be found in ***Table 1*** and for groundwater in ***Table 2***. EPI boring logs can be found in ***Appendix B***.

Laboratory reports for APEX and Libby Environmental were attached to the BSE *Site Investigation/Interim Cleanup Action Report* (BSE 2019).

3.0 INTERIM REMEDIAL CLEANUP ACTIONS

3.1 BSE Remedial Excavation

In August 2018, BSE directed the remedial excavation of the area of contamination identified by EPI (***Figure 3***). The depth of the excavation varied between 11 feet bgs in the west end to 12 feet bgs in the east. Groundwater was encountered in the excavation at those depths. In total, approximately 1,173 tons of petroleum contaminated soil was transported to the Wasco County Landfill in Oregon from Aug 16 to Aug 22, 2018 (*BSE 2019*).

3.2 Excavation Area Soil Sampling

Following excavation activities on August 22nd, five soil samples were obtained from the open excavation with the assistance of the tracked excavator. Four samples (EX CTR West, EX NE Floor, EX SE Floor, EX East Floor) were obtained from the center to the east end of the excavation at a depth of approximately 12 feet bgs. Sample EX East Sidewall was collected at a depth of approximately 10 feet bgs just above the water table. On August 29th, four borings (B-1, B-2, B-3, B-4) were advanced around the east and south sides of the excavation using a direct push drill rig operated by BB&A Environmental (BB&A) of Wilsonville, Oregon. Soil samples were obtained from the 10-foot and 15-foot level in each boring using a hollow bore sampler. Locations of the August 2018 soil samples from the excavation area and borings are shown on ***Figure 4***. Boring logs can be found in ***Appendix C***. Collected soil samples were transported under chain-of-custody to the ESN Northwest laboratory (ESN) in Olympia, WA. ESN soil analytical results are summarized in ***Table 3***.

All four floor samples detected elevated concentrations of lube oil in soil above the CUL. The east sidewall soil sample (EX East Sidewall), obtained from a depth of 10 feet bgs, did not detect gasoline, BTEX, or diesel/lube oil concentrations above laboratory reporting limits. Soil samples collected from borings B-1, B-2, B-3, and B-4 at 10 and 15 feet bgs did not detect concentrations of gasoline, diesel/lube oil, or BTEX above laboratory reporting levels.

Structural fill material was imported and placed into the open excavation. The material was compacted in layers and brought back up to surface grade.

3.4 Injection of Remediation Agents

As evidenced by the BSE excavation grab and boring soil samples, soil contaminated with DRO remained between 10 feet to 14 feet bgs across the area. Groundwater is present at the 10-foot depth in the localized groundwater. It is impacted by petroleum hydrocarbons. To address the residual soil and groundwater contamination, BSE coordinated with BB&A to design an in-situ remediation scheme utilizing their proprietary BOS 200® injection solution. In-situ remediation is achieved by the BOS 200® solution by combining conditioned activated carbon to adsorb contamination and provide biological matrix, together with nutrients and biological culture, to affect biological remediation of subsurface contamination. The technology has proven effective for remediation of both soil and groundwater on projects where BSE and BB&A have partnered in the past.

After reviewing site characterization information, on August 27 through August 29, 2018, BB&A completed 58 injection points across the excavated area. A total of 6,100 lbs. of BOS 200®; 3,950 lbs. of gypsum and 15 gallons of microbes were mixed in 4,350 gallons of water to make the injection solution. This solution was injected subsurface at 10, 12, and 14 feet bgs at each injection point (***Figure 5***).

Beginning in June 2019, the progress of bioremediation has been assessed through ongoing groundwater monitoring using monitoring wells (refer to Section 6.0 below).

4.0 SITE INVESTIGATIONS – 2019-2022

Soil and groundwater screening levels in use for this project for the purpose of determining contamination that may pose a threat to human health and the environment will follow MTCA Method A Cleanup Levels as delineated below.

Hazardous Substance	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (µg/L)
Gasoline	30	800
Benzene	0.03	5
Ethylbenzene	6	700
Toluene	7	1,000
Xylenes	9	1,000
Diesel/Lube Oil	2,000	500

These levels were developed in accordance with WAC 173-340-900, Table 830-1; required testing for petroleum releases. They are therefore considered to be adequately protective of human health and the environment for unrestricted land use.

4.1 Exploratory Borings – April 2019

On April 29, 2019, five borings (B-6, B-7, B-8, B-9, and B-10) were advanced around the excavated area (***Figure 6***). Soil samples were collected from each boring at various depths. Soil samples were analyzed for gasoline, diesel/lube oil, and VOCs. Borings B-6, B-9, and B-10 soil samples did not detect concentrations of gasoline, diesel/lube oil, or BTEX at the laboratory reporting limits. However, soil samples collected from borings B-7 and B-8 detected concentrations of gasoline, diesel/lube oil, and benzene above their CULs.

Boring Soil Sample Analytical Results – April 29, 2019

Boring #	Sample Depth (ft)	Gasoline (mg/kg)	Diesel (mg/kg)	Lube Oil (mg/kg)	Benzene (mg/kg)
B-7	13	**5,700**	**14,000**	**370,000**	**0.09**
B-7	15	**11**	**210**	**30,000**	**0.08**
B-8	11	**5,900**	**4,200**	**210,000**	<0.02
B-8	15	<10	<50	<100	<0.02
MTCA CUL	*Method A*	*30*	*2,000*	*2,000*	*0.03*

The five borings were completed as monitoring wells MW-1 (B-6), MW-2 (B-7), MW-3 (B-8), MW-4 (B-9), and MW-5 (B-10).

4.2 Exploratory Borings – 4/14/2021

Three borings were advanced on April 14, 2021, B-11, B-12, and SV-1 (***Figure 7***). Boring B-12 was completed as SV-2. Soil samples were collected at various depths from borings B-11 and B-12. Elevated concentrations of gasoline and lube oil above their CULs were detected in soil samples from both borings.

Soil Sample Analytical Results – 4/14/2021 (units: mg/kg)

Boring #	Depth	Gasoline (mg/kg)	Diesel (mg/kg)	Lube Oil (mg/kg)
B-11	13	**48**	<50	**6,000**
B-11	17	<10	<50	<100
B-12	13	**420**	<50	**5,200**
B-12	17	<10	<50	<100
MTCA CUL	*Method A*	*30*	*2,000*	*2,000*

Analytical results for BSE soil samples are summarized in Table 3. Boring logs can be found in Appendix C. Laboratory reports for 2019 through 2022 soil sample analysis can be found in ***Appendix E***.

5.0 GROUNDWATER MONITORING – March 2021 through June 2023

As discussed in the January 8, 2019, *Site Investigation Interim Cleanup Action Report* (Blue Sage, 2019), the progress of bioremediation is being monitored by groundwater monitoring. To accomplish this, five groundwater monitoring wells, MW-1, MW-2, MW-3, MW-4, and MW-5, were installed in April 2019 (Figure 6). BB&A, a Washington State licensed driller, installed the monitoring wells. Each monitoring well was constructed of 2" diameter, schedule 40 PVC slotted screen and blank pipe. The screened interval of each well was from 4 feet bgs to 14 feet bgs, which straddled the water table.

5.1 Monitoring Well Elevations Survey

BSE coordinated with Gibbs & Olson Civil Engineers and Land Surveyors (Gibbs & Olson) to obtain NAVD88 elevation information for the newly installed monitoring wells.

5.2 Groundwater Sampling Procedures

Prior to sampling the monitoring wells, depth to water referenced to the top of the well casing were measured and recorded. The static water level was measured in each monitoring well using a Slope Indicator Company, model 51453 water level indicator. The water level probe was lowered into the well until the instrument detected water. The cable on the indicator is laser-marked in 0.01-foot graduations with labels at 0.1-foot and 1.0-foot intervals.

Groundwater was sampled in each well using a peristaltic pump in accordance with the following protocol:

- The height of the water column within the well was calculated by subtracting the depth to water from the total depth of the well.
- Prior to sampling each monitoring well, the well was purged at a nominal discharge rate of <500 ml/minute to affect limited draw-down. Pumping continued at the low constant-rate throughout sampling at each monitoring well (*USEPA*, *November 1992*).
- Groundwater samples were collected from the well casing following EPA low stress and purging procedures.
- Purge water was collected for proper disposal (based on analytical results).
- The contract laboratory prepared the sample containers to conform to Ecology preservation techniques for the analytes of concern.
- Groundwater samples were collected with a peristaltic pump. Sample containers were open only as long as necessary to collect the samples.

- New dedicated tubing was used at each sampling location.

5.3 Quality Assurance/Quality Control (QA/QC)

Quality Assurance/Quality Control (QA/QC) included generally accepted procedures for sample collection, storage, tracking, documentation, and analysis. Disposable sampling equipment was used to the extent practicable. Reused sampling equipment was decontaminated with an anionic, biodegradable detergent wash and water rinse before sampling each well. Samples were collected into laboratory supplied containers. Each container was labeled with a sample number, date of sampling, project identifier, and analytical method. Sample bottles were placed inside zip-lock™ bags and stored inside a cooler/shipping container packed with ice. Samples were delivered to an Ecology-certified analytical laboratory under chain-of-custody (COC) within 24 hours of being collected.

5.4 Groundwater Analytical Results

Groundwater samples were collected quarterly from the five monitoring wells from January 2021 to June 2022. Samples were analyzed for diesel/lube oil (NW-TPH-Dx), gasoline (NWTPH-Gx), and BTEX (Method 8260). During this period, all analytical results across the five monitoring wells have consistently been not detected at listed detection limits with the exception of monitoring well MW-5. In March 2022, gasoline was detected in this well at 140 µg/L. However, this is below the CUL of 800 µg/L. MW-5 was sampled again in March 2023. No concentration of gasoline was detected above the laboratory reporting limit. Analytical results are summarized in Table 4a.

The five monitoring wells have also been monitored for sulfate and nitrate concentrations that are components in BOS 200. Nitrates are food for the hydrocarbon-degrading microbes during aerobic biological remediation. Sulfates continue stimulating microbe activity during anaerobic biological remediation. Nitrates are used up quickly at the beginning of biological degradation. Monitored concentrations of nitrates in groundwater have remained below the WAC 173-200 Water Quality Level of 10 mg/L. Sulfate concentrations have decreased over time in the five monitoring wells. As of June 2023, concentrations of sulfate in the five monitoring wells are below the WAC 173-200 Water Quality Level of 250 mg/L. Results are summarized in Table 4b.

6.0 VAPOR INTRUSION MONITORING

In April 2021, two soil vapor monitoring wells (SV-1 and SV-2) were installed around the northeast and north side of the showroom building (***Figure 8***). Soil vapor samples were collected from SV-1 and SV-2 on April 20 and June 18, 2021, using the shut-in test method. The shut-in test is performed by isolating the sampling train from the vapor sampling point and applying a vacuum to the sampling train. The applied vacuum should hold steady (not decrease) for at least 60 seconds. Start and end vacuum levels are recorded. Samples were collected into 1L Summa canisters with a preset flow regulator as supplied by the laboratory. Summa canisters were transported to an Ecology accredited laboratory within 24 hours of being filled. Chain-of-custody procedures were followed to document sample handling.

Soil vapor samples were analyzed for air phase hydrocarbon (APH) petroleum fractions, and VOCs by EPA Method TO-15 per Ecology Memorandum 18, petroleum-based cleanups. Concentrations of VOCs were below Method B Sub-Slab screening levels. Concentrations of Total Petroleum Hydrocarbons were also below the Method B Sub-Slab screening level. Soil gas analytical results are summarized in Table 5.

Soil gas laboratory reports can be found in Appendix G.

7.0 INTERPRETATION OF FINDINGS

Point of compliance (POC) for the Site is the property boundaries. Based on a review of soil and groundwater sample concentrations, contaminants of concern for this site are gasoline, diesel/lube oil, and BTEX. RCRA 8 metals, c-PAHs, and PCBs were either not detected, or below their respective MTCA Method A cleanup levels in soil and groundwater.

7.1 Soil Analytical Results

Following the 2018 remediation by excavation, remaining petroleum hydrocarbon contaminated soil below 12 feet is concentrated in the eastern half of the area (***Figure 9***). Soil samples from the floor of the excavation in 2018 and the 2019 borings B-7 and B-8 detected heavy concentrations of diesel, lube oil, and gasoline (Table 3). Borings B-11 and B-12 advanced in 2021 detected significantly lower concentrations of contaminants. This is attributed to biological remediation from the injection of BOS 200® solution. Borings advanced by EPI in July 2018 identified areas with elevated concentrations of heavy oil and/or gasoline. These areas were removed by excavation in August 2018. Remaining soil contamination is inside the excavation boundaries (Figure 9) on the property.

7.2 Groundwater Analytical Results

BOS 200® was injected into the remediated area in late August 2018 (Figure 5). This In-situ remediation uses conditioned activated carbon and biological remediation agents consisting of BOS 200® and hydrocarbon degrading microbes to reduce and/or eliminate subsurface contamination. This mixture traps contaminants via carbon adsorption and begins the subsequent treatment via biological degradation within the BOS 200® matrix as the product incorporates both aerobic and anaerobic biological processes.

Groundwater monitoring began in June 2019 allowing the BOS 200® mixture time to begin its process of trapping and treating petroleum hydrocarbons. Samples were collected from the five monitoring wells from June 2019 through June 2022. During that period analytical data was gathered for diesel/lube oil (NWTPH-Dx), gasoline (NWTPH-Gx), VOCs (Method 8260), c-PAH (Method 8270), PCB (Method 8082), and lead (Method 6020). Analytical results during that period for these analytes were either not detected at laboratory reporting limits or below CULs. In June 2023, samples were collected from the five monitoring wells and analyzed for EDB (Method 8011). Analytical results for EDB in these samples were not detected at laboratory reporting limits (Table 4a).

The BOS 200® mixture has reduced the concentrations of petroleum hydrocarbons in groundwater to below Method A CULs.

7.3 Soil Vapor Analysis

Soil vapor samples were collected from monitoring wells SV-1 and SV-2 in 2021 (Figure 8) in 2021. Results were below air phase hydrocarbon (APH) petroleum fractions, and VOCs by EPA Method TO-15 per Ecology Memorandum 18, petroleum-based cleanups (Table 5). Both of these monitoring wells are located inside the excavation boundary where remaining concentrations of petroleum hydrocarbons are located. The BOS 200® carbon matrix has kept potential vapor intrusion levels to below Method B Sub-Slab screening levels.

8.0 RECOMENDATIONS

Remaining gasoline and diesel/lube oil elevated soil concentrations are contained within the property boundary. The BOS 200® mixture has allowed biological remediation to reduce soil concentrations as evidenced by borings B-7 and B-8 versus B-11 and B -12 (Figure 9). The entire property is capped with asphalt and the sales building. Stormwater is captured in catch basins and directed into the Longview stormwater drainage system. This reduces the potential for movement of contaminants into groundwater. BSE recommends limiting groundwater sampling to biannual for 2023 and reducing frequency to 18 months beginning in 2024.

BSE is requesting a NFA determination based on Model Remedies Option 2, Method A - Unrestricted.

9.0 LIMITATIONS

This report has been prepared for the exclusive use of the Bud Clary Auto Group, Kelly and Bryce Clary, and their designated representatives for specific application to the Longview Site. Reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Blue Sage Environmental, Inc., shall be at the user's sole risk. Within the limitations of scope, schedule, and budget, this report was completed in a manner consistent with that level of care and skill exercised by members of the profession currently practicing in the same locality under similar conditions as this project. No warranty is either express or implied.

REFERENCES

Washington Department of Ecology, *Guidance for Remediation of Petroleum Contaminated Soils*, Publication No. 10-09-057, September 2011.

Washington Department of Ecology, Toxics Cleanup Program, *Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC*, Publication No. 94-06, Revised 2013, Olympia, Washington.

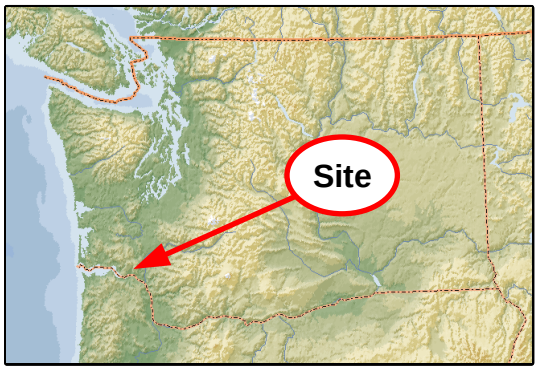
Blue Sage Environmental, Inc., January 8, 2019, *Site Investigation/Interim Cleanup Action Report*, Kennewick, Washington, Consultants Report to Client/Ecology.

Blue Sage Environmental, Inc., February 3, 2020, *2019 Site Status Report*, Kennewick, Washington, Consultants Report to Client/Ecology.

Blue Sage Environmental, Inc., February 1, 2021, *2020 Annual Status Report*, Kennewick, Washington, Consultants Report to Client/Ecology.

FIGURES

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632



BLUE SAGE ENVIRONMENTAL INC KENNEWICK, WA	***Site Location Maps*** ***Bud Clary Subaru*** ***961 Commerce Avenue*** ***Longview, Washington***	Figure 1

Project File: 01-0011-A-F1 revised.vsd

Mapping Reference: Delorme, City of Longview GIS mapping, Bing, and Google Maps

COMMERCE AVE

FIR ST

SIDEWALK

SIDEWALK

Alley

CCS EXCAVATION (07/16/18)

S2NE
SPOT3
SPOT2
S2N-MID
S2NW
S2NW-4
SPOT1

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19 SB-20 SB-21 SB-22 SB-23 SB-24 SB-25 SB-26 SB-27 SB-28 SB-29 SB-30 SB-31 SB-32 SB-33 SB-34 SB-35 SB-36 SB-37 SB-38 SB-39 SB-40 SB-41 SB-42 SB-43

0 20
10
(FEET)

N

LEGEND

S2NE Grab Sample Location and Identification Number (July 2018)	SS Sanitary Sewer Line
SB-33 Soil Boring Location and Identification Number (July 2018)	W Water Line
PL Property Line	UE Underground Power Line
	Qpp Power Pole
	Catch Basin
	Qmh Manhole
	SW Stormwater Line
	GAS Natural Gas Line

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

EPI Boring Locations 2018
Bud Clary Subaru

961 Commerce Avenue
Longview, Washington

Date: 06/05/21

Figure 2

COMMERCE AVE

0 20
10
(FEET)

SIDEWALK

Excavated Area

SIDEWALK

FIR ST

Alleyway

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19 SB-20 SB-21 SB-22 SB-23 SB-24 SB-25 SB-26 SB-27 SB-28 SB-29 SB-30 SB-31 SB-32 SB-33 SB-34 SB-35 SB-36 SB-37 SB-38 SB-39 SB-40 SB-41 SB-42 SB-43

LEGEND

SB-33 Soil Boring Location and Identification Number
PL Property Line
SW Stormwater Line
GAS Natural Gas Line
SS Sanitary Sewer Line
W Water Line
UE Underground Power Line
pp Power Pole
Catch Basin
mh Manhole

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Excavated Area - August 2018
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Figure
3

COMMERCE AVE

N

0 20
10
(FEET)

SIDEWALK

FIR ST

SIDEWALK

Alleyway

Excavated Area

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11 SB-12 SB-13 SB-14 SB-15 SB-16 SB-17 SB-18 SB-19 SB-20 SB-21 SB-22 SB-23 SB-24 SB-25 SB-26 SB-27 SB-28 SB-29 SB-30 SB-31 SB-32 SB-33 SB-34 SB-35 SB-36 SB-37 SB-38 SB-39 SB-40 SB-41 SB-42 SB-43

B1 B2 B3 B4

E Sidewall
E
SE
NE
CNTR

UE SW GAS SS W PP mh PL

LEGEND

SB—33 %	Soil Boring Location and Identification Number	SS	Sanitary Sewer Line
PL	Property Line	W	Water Line
SW	Stormwater Line	UE	Underground Power Line
GAS	Natural Gas Line	OPP	Power Pole
		▤	Catch Basin
		Omh	Manhole
		61 X	Soil Boring Location and Identification Number
		NE O	Test Pit Location and Identification Number

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

BSE Test Pits & Soil Borings
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Figure
4

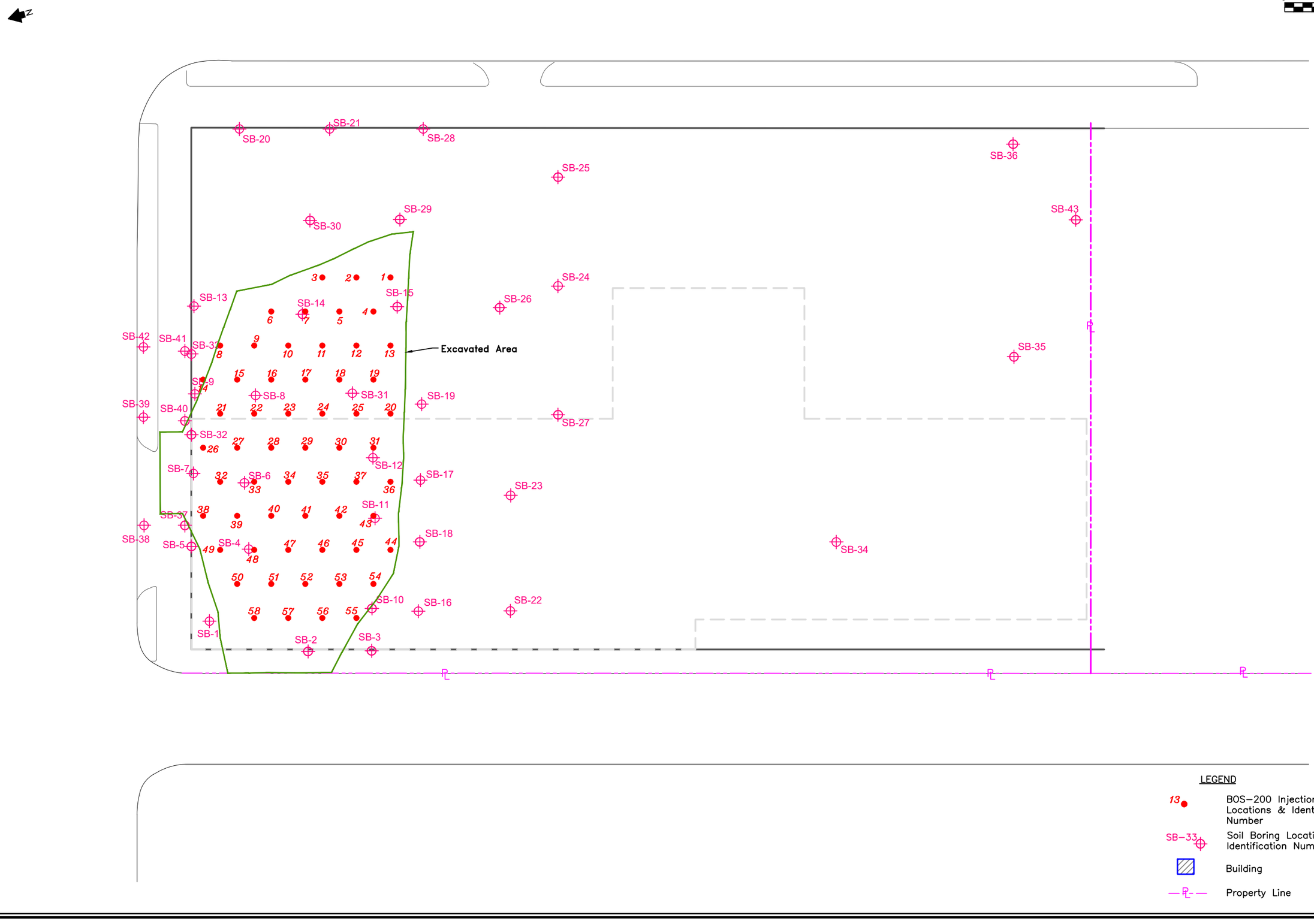


FIGURE #: 5

SITE PLAN WITH 7' GRID
COMMERCIAL PROPERTY
961 COMMERCE AVENUE, LONGVIEW, WASHINGTON

PROJECT CODE: BLUESAGELONGVIEW
DATE: 12/20/18
SCALE: 1"=20'
DRAWN: K.D.DESIGNS
CHECKED: RANDALL BOESE

PORTLAND OFFICE
25195 SW Parkway Ave. #207
Wilsonville, OR
ph: 503.570.9484

EUGENE OFFICE
32986 Roberts Ct.
Coburg, OR
ph: 541.484.9484

www.BBAENV.COM

BB&A ENVIRONMENTAL

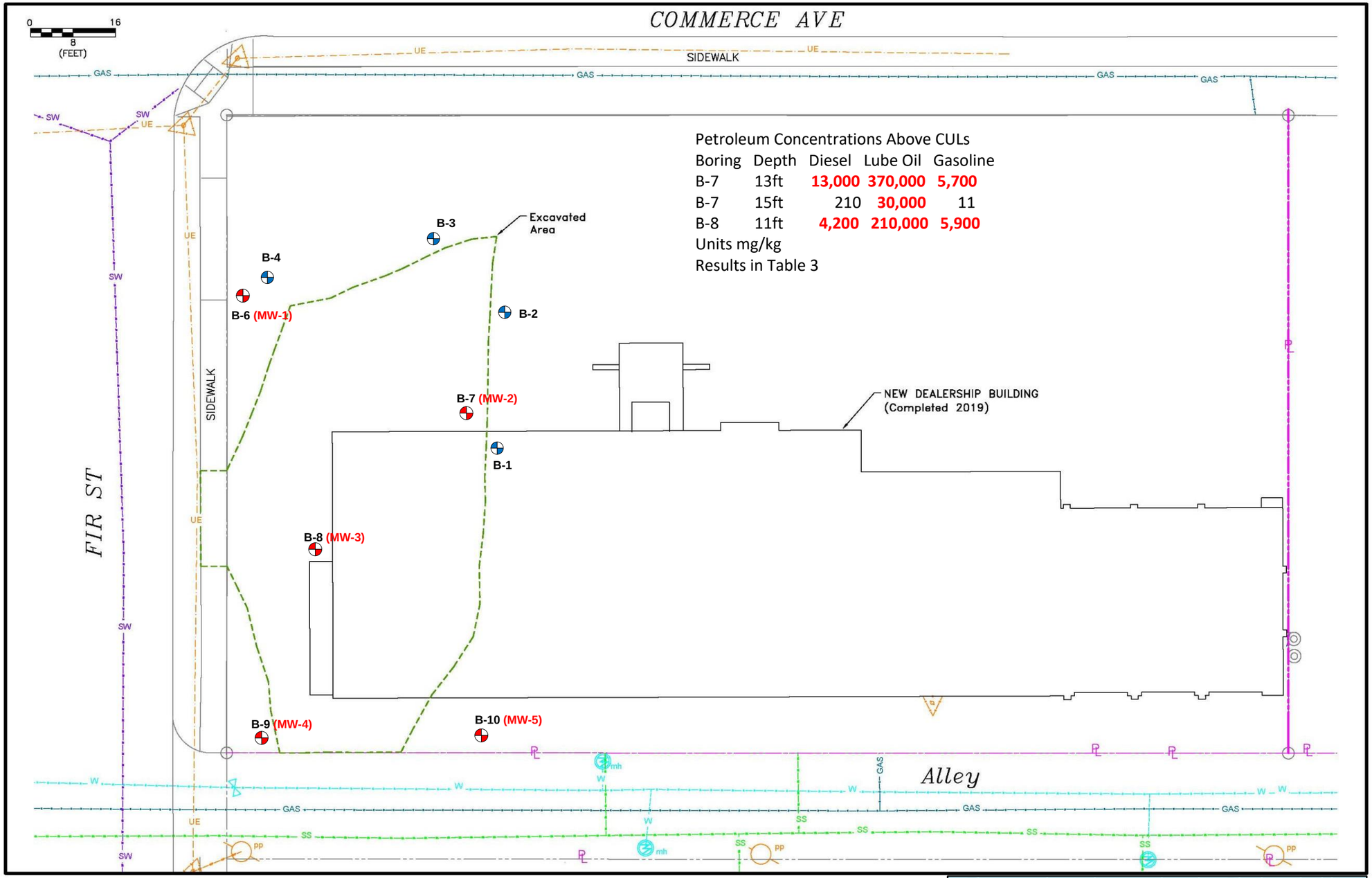
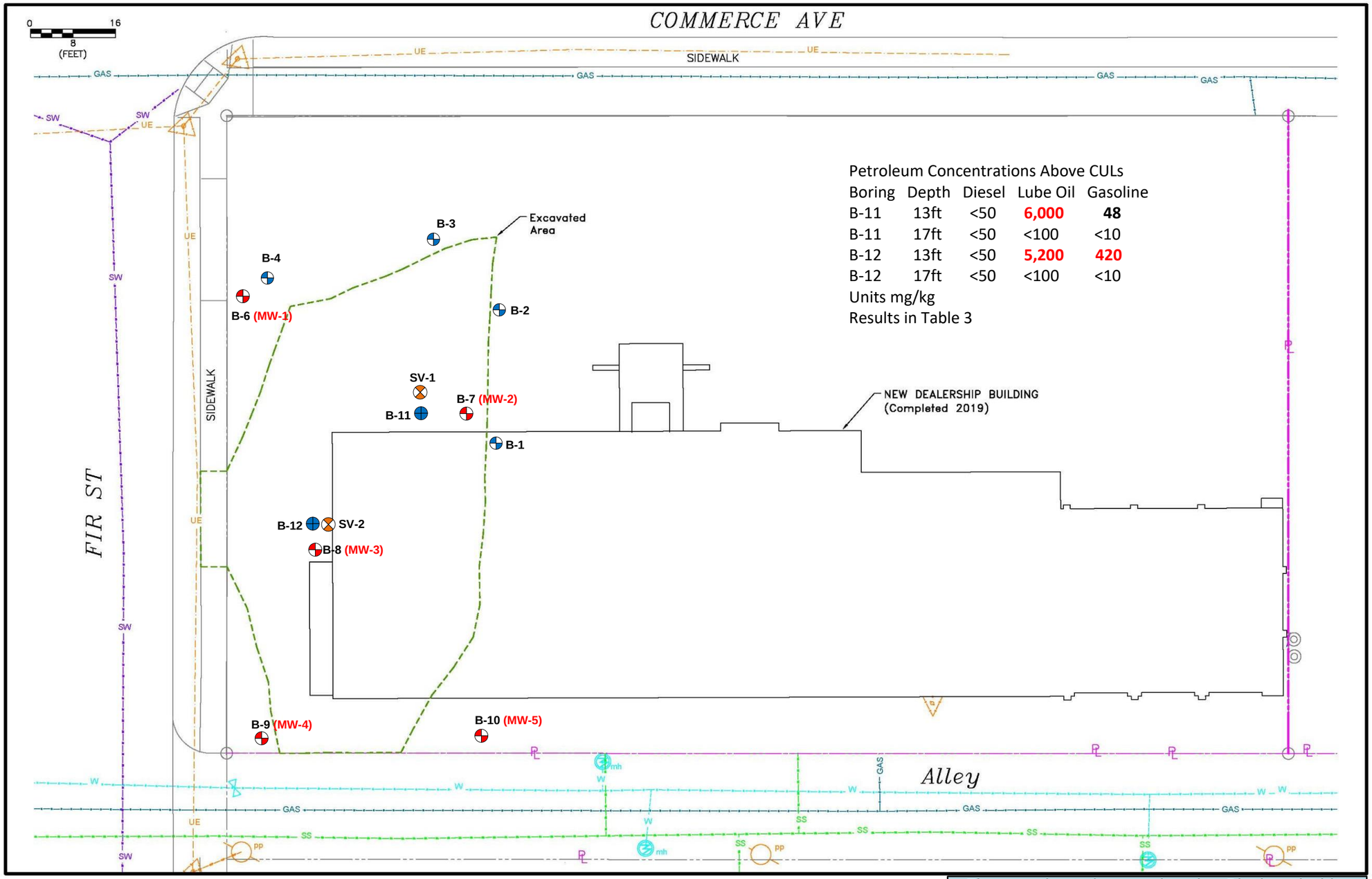


Figure and notations are in color. Black and white copies may not be suitable for use.

Legend

- 2018 Borings
- 2019 Borings/Monitoring Wells

Blue Sage Environmental INC Kennewick, WA	**BSE Exploratory Borings – April 29, 2019** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 5/30/23	Figure 6



Petroleum Concentrations Above CULs

Boring	Depth	Diesel	Lube Oil	Gasoline
B-11	13ft	<50	**6,000**	**48**
B-11	17ft	<50	<100	<10
B-12	13ft	<50	**5,200**	**420**
B-12	17ft	<50	<100	<10

Units mg/kg

Results in Table 3

Figure and notations are in color. Black and white copies may not be suitable for use.

Legend

- 2018 Borings
- 2019 Borings/Monitoring Wells
- 2021 Borings
- 2021 Soil Vapor Wells

Blue Sage Environmental INC Kennewick, WA	**BSE Exploratory Borings – April 15, 2021** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 5/30/23	Figure 7

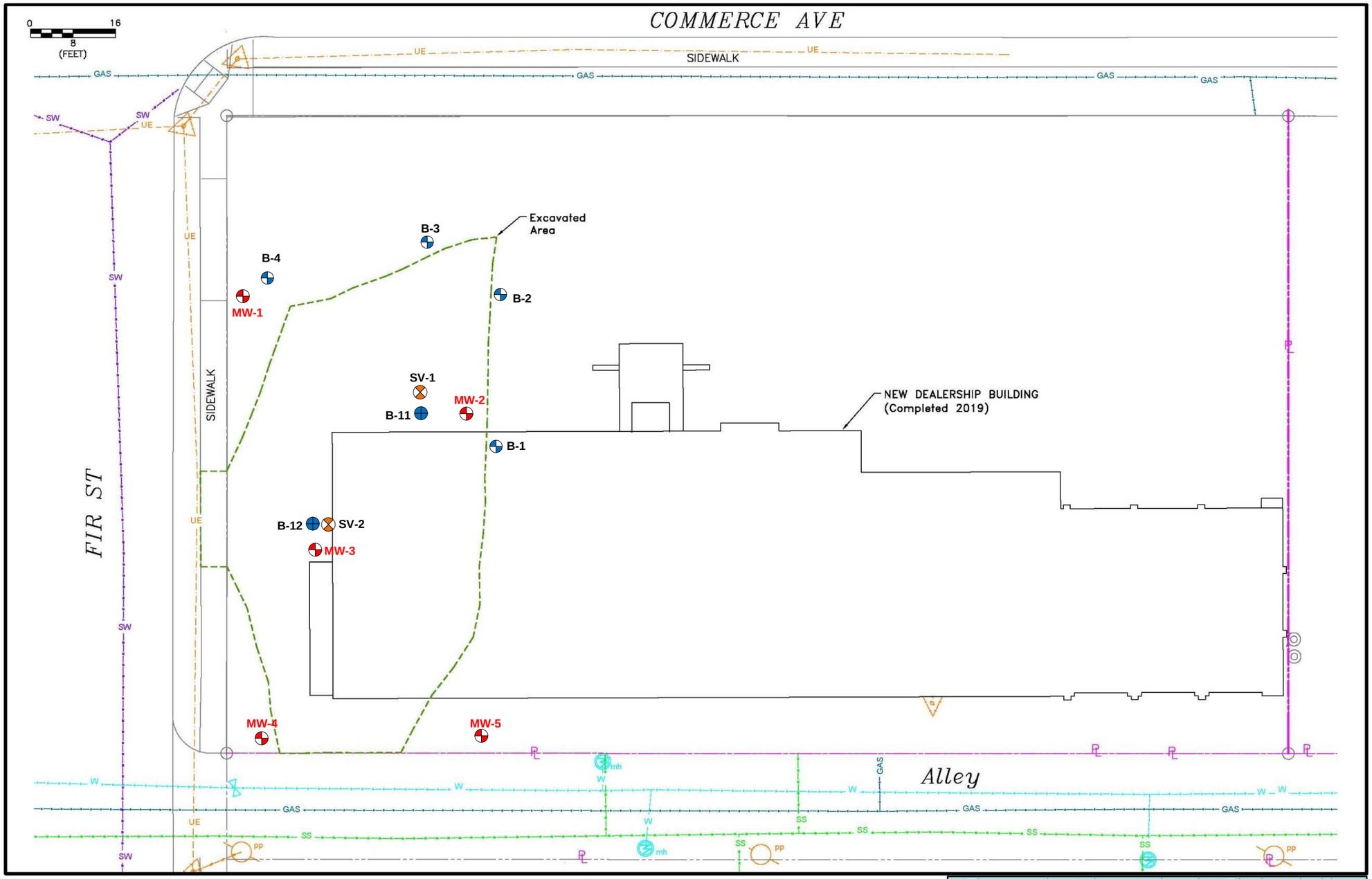
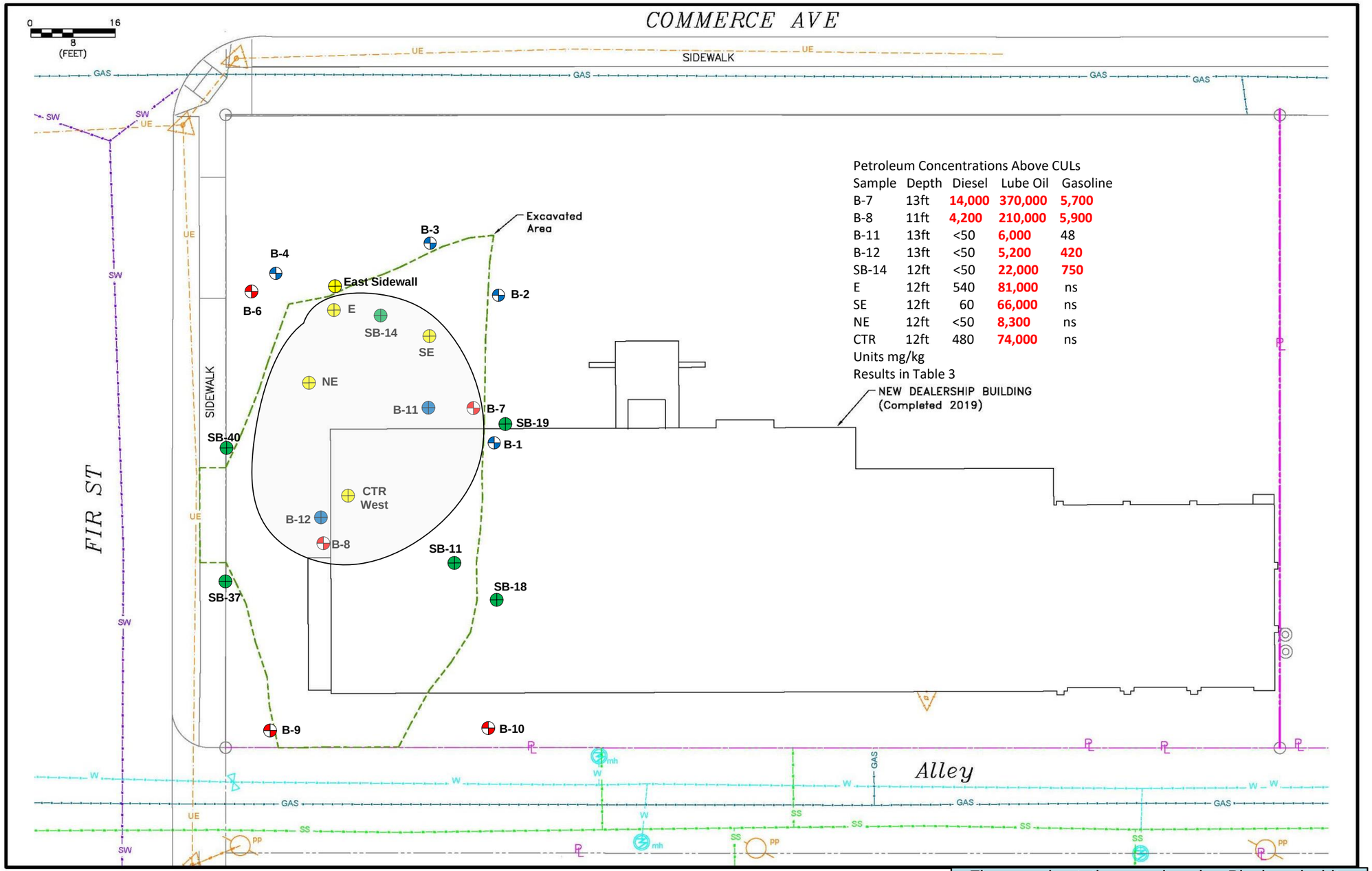


Figure and notations are in color. Black and white copies may not be suitable for use.

Legend

- 2018 Borings
- 2019 Borings/Monitoring Wells
- 2021 Borings
- 2021 Soil Vapor Wells

Blue Sage Environmental INC Kennewick, WA	**BSE Groundwater and Soil Vapor Monitoring Wells** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 5/30/23	Figure 8



Petroleum Concentrations Above CULs

Sample	Depth	Diesel	Lube Oil	Gasoline
B-7	13ft	**14,000**	**370,000**	**5,700**
B-8	11ft	**4,200**	**210,000**	**5,900**
B-11	13ft	<50	**6,000**	48
B-12	13ft	<50	**5,200**	**420**
SB-14	12ft	<50	**22,000**	**750**
E	12ft	540	**81,000**	ns
SE	12ft	60	**66,000**	ns
NE	12ft	<50	**8,300**	ns
CTR	12ft	480	**74,000**	ns

Units mg/kg
Results in Table 3

Figure and notations are in color. Black and white copies may not be suitable for use.

Legend

- 2018 Excavation Floor
- EPI 2018 Boring
- BSE 2018 Borings
- BSE 2019 Borings
- 2021 Borings
- 2021 Soil Vapor Wells
- Contaminated Soil

Blue Sage Environmental INC
Kennewick, WA

Area of Contaminated Soil
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Date: 5/30/23

Figure 9

TABLES

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

Table 1
Summary of Soil Analytical Data – Direct Push Technology Samples
Bud Clary Subaru
961 Commerce Avenue, Longview, Washington

Sample ID	Sample Depth (Feet)	Sample Date	Petroleum Hydrocarbons			BTEX[c]				Total PCBs[d]
			GRO[a]	DRO[b]	ORO[b]	Benzene	Toluene	Ethylbenzene	Xylenes	
SB-1	10	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
	12	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-2	8	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
	13	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-3	10	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
	13	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-4	4	7/23/2018	--	<50	<250	--	--	--	--	--
	8	7/23/2018	**600 E**	<50	**590**	<0.02	<0.10	<0.05	<0.15	--
	12	7/23/2018	**29**	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-5	12	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-6	12	7/23/2018	**61**	<50	**1,850**	<0.02	<0.10	<0.05	<0.15	--
SB-7	8	7/23/2018	--	<50	<250	--	--	--	--	--
	10	7/23/2018	**170**	<50	**3,660**	<0.02	<0.10	<0.05	<0.15	--
	12	7/23/2018	--	<50	<250	--	--	--	--	--
SB-8	4	7/23/2018	--	<50	<250	--	--	--	--	--
	8	7/23/2018	**290 E**	<50	**16,000**	<0.02	<0.10	<0.05	**0.5**	--
	12	7/23/2018	--	<50	**3,010**	--	--	--	--	--
SB-9	10	7/23/2018	**60**	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-10	10	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-11	10	7/23/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-12	4	7/23/2018	--	<50	<250	--	--	--	--	--
	6	7/23/2018	**640 E**	<50	**12,400**	<0.02	<0.10	<0.05	**0.45**	--
	8	7/23/2018	--	<50	**4,380**	--	--	--	--	--
SB-13	12	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-14	8	7/24/2018	--	<50	**16,600**	--	--	--	--	--
	12	7/24/2018	**750 E**	<50	**22,700**	<0.02	<0.10	**0.41**	**1.75**	--
	16	7/24/2018	--	<50	**380**	--	--	--	--	--
SB-15	8	7/24/2018	--	<50	**34,800**	--	--	--	--	--
	10	7/24/2018	**740 E**	<50	**20,000 E**	<0.02	<0.10	**0.083**	**0.47**	--
	14	7/24/2018	--	<50	**560**	--	--	--	--	--
SB-16	12	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-17	12	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-18	12	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-19	12	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-20	12	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-21	12	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-22	8	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-24	10	7/24/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-25	16	7/25/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-26	16	7/25/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-28	14	7/25/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-29	8	7/25/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-30	6	7/25/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-31	10	7/25/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-34	4	7/26/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	ND
SB-35	10	7/26/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	ND
SB-36	12	7/26/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	ND
SB-37	9	7/31/2018	**17**	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-38	8	7/31/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-39	10	7/31/2018	**77**	<50	**1,400**	<0.02	<0.10	<0.05	<0.15	--
	15	7/31/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-40	9	7/31/2018	<10	<50	**350**	<0.02	<0.10	<0.05	<0.15	--
SB-41	10	7/31/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-42	9	7/31/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
SB-43	9	7/31/2018	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	--
MTCA Method A Soil Cleanup Level for Unrestricted Land Uses[e]			**30/100[f]**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**1**

Notes:

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

Bold Bold results indicate that the compound was detected above the laboratory method detection limit.

Shaded cells indicate that the compound was detected at a concentration greater than the MTCA Method A cleanup level.

a Analyzed by NWTPH-Gx.

b Analyzed by NWTPH-Dx/Dx Extended.

c Analyzed by EPA Method 8260C.

d Analyzed by EPA Method 8280

e Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1, Washington Administrative Code (WAC) 173-340-900.

f MTCA Method A Soil Cleanup Level is 30 mg/kg when benzene is present in the sample and 100 mg/kg when benzene is not detected.

-- Not analyzed

ND Not detected above the method detection limit.

Compounds

GRO Gasoline-range organics

DRO Diesel-range organics

ORO Oil-range organics

BTEX Benzene, toluene, ethylbenzene and total xylenes

Qualifier:

E Reported result is an estimate because it exceeds the calibration range.

Table 2
Summary of Groundwater Analytical Data – Direct Push Technology Samples
Bud Clary Subaru
961 Commerce Avenue, Longview, Washington

Sample ID	Sample Depth (Feet)	Sample Date	Petroleum Hydrocarbons			BTEX[c]			
			GRO[a]	DRO[b]	ORO[b]	Benzene	Toluene	Ethylbenzene	Xylenes
SB-1GW	9.3	7/23/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-2GW	9.6	7/23/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-3GW	9.4	7/23/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-4GW	10.1	7/23/2018	**2,200**	<200	**1,800**	<1.0	<2.0	<1.0	<2.0
SB-5GW	9.6	7/23/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-6GW	7.5	7/23/2018	**7,000 E**	<200	**40,000**	<1.0	<2.0	<1.0	**7.4**
SB-7GW	9.5	7/23/2018	**440**	<200	**5,200**	<1.0	<2.0	<1.0	<2.0
SB-8GW	9.7	7/23/2018	**17,000 E**	<200	**85,000**	<1.0	<2.0	<1.0	**8.3**
SB-9GW	9.6	7/23/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-10GW	7.5	7/23/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-11GW	7.4	7/23/2018	**290**	<200	<400	<1.0	<2.0	<1.0	**3.7**
SB-12GW	7.4	7/23/2018	**420**	<200	<400	<1.0	<2.0	<1.0	**5.4**
SB-13GW	9.5	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-14GW	9.7	7/24/2018	**7,600**	<200	**35,100**	<1.0	<2.0	**2.5**	**19.4**
SB-15GW	9.6	7/24/2018	**4,780**	<200	**5,600**	<1.0	<2.0	<1.0	**2.8**
SB-16GW	7.5	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-17GW	7.5	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-18GW	7.6	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-19GW	7.7	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-20GW	9.4	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-21GW	9.5	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-24GW	9.6	7/24/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-25GW	9.5	7/25/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-26GW	9.6	7/25/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-28GW	9.6	7/25/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-29GW	9.6	7/25/2018	<100	<200	<400	--	--	--	**--**
SB-30GW	9.6	7/25/2018	<100	<200	<400	--	--	--	**--**
SB-31GW	8	7/25/2018	--	<200	<400	--	--	--	**--**
SB-32GW	9.6	7/25/2018	--	<200	<400	--	--	--	**--**
SB-33GW	9.6	7/25/2018	--	<200	<400	--	--	--	**--**
SB-34GW	8	7/26/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-35GW	10.2	7/26/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-36GW	9.5	7/26/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-37GW	11.0	7/31/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-38GW	9.5	7/31/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-39GW	9.0	7/31/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-40GW	10.0	7/31/2018	**970**	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-41GW	9.5	7/31/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-42GW	9.0	7/31/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
SB-43GW	9.0	7/31/2018	<100	<200	<400	<1.0	<2.0	<1.0	<2.0
MTCA Method A Groundwater Cleanup Level[d]			**800/1,000[e]**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

Notes:

All results presented in micrograms per liter (µg/L).

Bold Bold results indicate that the compound was detected above the laboratory method detection limit.

Shaded cells indicate that the compound was detected at a concentration greater than the MTCA Method A cleanup level.

a Analyzed by NWTPH-Gx.

b Analyzed by NWTPH-Dx/Dx Extended

c Analyzed by EPA Method 8260C.

d Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1, Washington Administrative Code (WAC) 173-340-900.

e MTCA Method A Groundwater Cleanup Level is 800 µg/L when benzene is present in the sample and 1,000 µg/L when benzene is not detected.

-- Not analyzed

Compounds:

GRO Gasoline-range organics

DRO Diesel-range organics

ORO Oil-range organics

BTEX Benzene, toluene, ethylbenzene and total xylenes

Qualifier:

E Reported result is an estimate because it exceeds the calibration range.

Table 3
BSE Soil Analytical Data - Excavation and Borings
Bud Clary Subaru
961 Commerce Avenue, Longview, WA

Sample Location	Sample Date	Sample Number	Sample Depth (ft)	Diesel	Lube Oil	Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
units: mg/kg		***MTCA Method A Cleanup Level***		***2000***	***2000***	***30/100***	***0.03***	***7***	***6***	***9***	***250***
Excavation	08/22/18	EX CTR West	12	**480**	**74,000**	-	-	-	-	-	-
Excavation	08/22/18	EX NE Floor	12	<50	**8,300**	-	-	-	-	-	-
Excavation	08/22/18	EX SE Floor	12	**60**	**66,000**	-	-	-	-	-	-
Excavation	08/22/18	EX East Floor	12	**540**	**81,000**	-	-	-	-	-	-
Excavation	08/22/18	EX East Sidewall	10	<50	<100	<10	<0.02	<0.05	<0.05	<0.15	-
B1	08/29/18 08/29/18	B1-10 B1-15	10 15	<50 <50	<100 <100	<10 <10	<0.02 <0.02	<0.05 <0.05	<0.05 <0.05	<0.15 <0.15	<5 -
B2	08/29/18 08/29/18 08/29/18	B2-10 B2-15 B2-15 (Dup)	10 15 15	<50 <50 -	<100 <100 -	<10 <10 <10	<0.02 <0.02 <0.02	<0.05 <0.05 **0.53**	<0.05 <0.05 **0.12**	<0.15 <0.15 **0.61**	<5 - -
B3	08/29/18 08/29/18	B3-10 B3-15	10 15	<50 <50	<100 <100	<10 <10	<0.02 <0.02	<0.05 <0.05	<0.05 <0.05	<0.15 <0.15	<5 -
B4	08/29/18 08/29/18 08/29/18	B4-10 B4-15 B4-15 (Dup)	10 15 15	<50 <50 <50	<100 <100 <100	<10 <10 -	<0.02 <0.02 -	<0.05 <0.05 -	<0.05 <0.05 -	<0.15 <0.15 -	<5 - -
MW-1/B6	04/29/19	B6-15	15	<50	<100	<10	<0.02	<0.05	<0.05	<0.15	-
MW-2/B7	04/29/19 04/29/19	B7-13 B7-15	13 15	**14,000** **210**	**370,000** **30,000**	**5,700** **11**	**0.09** **0.08**	**0.48** **0.05**	**1.4** <0.05	**5.8** <0.15	- -
MW-3/B8	04/29/19 04/29/19	B8-11 B8-15	11 15	**4,200** <50	**210,000** <100	**5,900** <10	<0.02 <0.02	<0.05 <0.05	<0.05 <0.05	<0.15 <0.15	- -
MW-4/B9	04/29/19	B9-11	11	<50	<100	<10	<0.02	<0.05	<0.05	<0.15	-
MW-5/B10	04/29/19	B10-15	15	<50	<100	<10	<0.02	<0.05	<0.05	<0.15	-
B11	04/15/21 04/15/21	B-11-13 B-11-17	13 17	<50 <50	**6,000** <100	**48** <10	<0.02 <0.02	<0.05 <0.05	<0.05 <0.05	<0.15 <0.15	- -
B12	04/15/21 04/15/21	B-12-13 B-12-17	13 17	<50 <50	**5,200** <100	**420** <10	<0.02 <0.02	**0.05** <0.05	**0.21** <0.05	**1.2** <0.15	- -

Notes:

- Contaminant not analyzed
5.9 Bold number(s) indicate contaminant detected
31 Bold and red number(s) indicate concentration above MTCA Method A cleanup level

Table 4a
BSE Groundwater Analytical Data
Bud Clary Subaru
961 Commerce Avenue, Longview, WA

Monitoring Well	Sample Date	Diesel (µg/L)	Lube Oil (µg/L)	Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total Lead (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	c-PAH (µg/L)	PCB (µg/L)	Elevation TOC	Depth to Water	Water Table Elevation
MTCA Method A Cleanup Level		***500***	***500***	***800***	***50***	***1000***	***700***	***1000***	***15***	***20***	***0.01***	***5***	***0.1***	***0.1***	MSL	(ft)	(ft)
MW-1	06/27/19	<250	<250	<100	<1	<1	<1	<3	<1	<1	-	<1	<0.1	-	*16.95*	8.94	8.01
	09/06/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.65	7.30
	12/02/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.36	7.59
	09/25/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.19	7.76
	12/19/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		7.97	8.98
	03/17/21	<50	<100	<100	<1	<1	<1	<3	-	-	-	-	-	-		7.93	9.02
	06/17/21	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.52	8.43
	09/21/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.68	7.27
	12/08/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		7.68	9.27
	03/31/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.17	8.78
	06/01/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		7.83	9.12
	09/28/22	-	-	-	-	-	-	-	-	-	-	-	-	-		9.67	7.28
	12/12/22	-	-	-	-	-	-	-	-	-	-	-	-	-		8.36	8.59
	03/20/23	-	-	-	-	-	-	-	-	-	-	-	-	-		8.45	8.50
	06/22/23	-	-	-	-	-	-	-	-	-	<0.01	-	-	-		8.44	8.51
MW-2	06/27/19	<250	<250	<100	<1	<1	<1	<3	<1	<1	-	<1	<0.1	-	*17.20*	9.15	8.05
	09/06/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.90	7.30
	12/02/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.60	7.60
	09/25/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.37	7.83
	12/19/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.33	8.87
	03/17/21	<50	<100	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.01	9.19
	06/17/21	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.68	8.52
	09/21/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.89	7.31
	12/08/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		7.88	9.32
	03/31/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.35	8.85
	06/01/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.00	9.20
	09/28/22	-	-	-	-	-	-	-	-	-	-	-	-	-		9.90	7.30
	12/12/22	-	-	-	-	-	-	-	-	-	-	-	-	-		8.57	8.63
	03/20/23	-	-	-	-	-	-	-	-	-	-	-	-	-		8.64	8.56
	06/22/23	-	-	-	-	-	-	-	-	-	<0.01	-	-	-		8.66	8.54
MW-3	06/27/19	<250	<250	<100	<1	<1	<1	<3	<1	<1	-	<1	<0.1	-	*17.32*	9.28	8.04
	09/06/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		10.02	7.30
	12/02/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.76	7.56
	09/25/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.52	7.80
	12/19/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.45	8.87
	03/17/21	<50	<100	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.20	9.12
	06/17/21	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.80	8.52
	09/21/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.98	7.34
	12/08/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.00	9.32
	03/31/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.49	8.83
	06/01/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.12	9.20
	09/28/22	-	-	-	-	-	-	-	-	-	-	-	-	-		9.95	7.37
	12/12/22	-	-	-	-	-	-	-	-	-	-	-	-	-		8.68	8.64
	03/20/23	-	-	-	-	-	-	-	-	-	-	-	-	-		8.76	8.56
	06/22/23	-	-	-	-	-	-	-	-	-	<0.01	-	-	-		8.80	8.52

Table 4a
BSE Groundwater Analytical Data
Bud Clary Subaru
961 Commerce Avenue, Longview, WA

Monitoring Well	Sample Date	Diesel (µg/L)	Lube Oil (µg/L)	Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	Total Lead (µg/L)	MTBE (µg/L)	EDB (µg/L)	EDC (µg/L)	c-PAH (µg/L)	PCB (µg/L)	Elevation TOC	Depth to Water	Water Table Elevation
MTCA Method A Cleanup Level		***500***	***500***	***800***	***50***	***1000***	***700***	***1000***	***15***	***20***	***0.01***	***5***	***0.1***	***0.1***	MSL	(ft)	(ft)
MW-4	06/27/19	<250	<250	<100	<1	<1	<1	<3	<1	<1	-	<1	<0.1	-	*17.30*	9.29	8.01
	09/06/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		10.00	7.30
	12/02/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.73	7.57
	09/25/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.56	7.74
	12/19/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.38	8.92
	03/17/21	<50	<100	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.35	8.95
	06/17/21	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.87	8.43
	09/21/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		10.02	7.28
	12/08/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.05	9.25
	03/31/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.55	8.75
	06/01/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.19	9.11
	09/28/22	-	-	-	-	-	-	-	-	-	-	-	-	-		9.98	7.32
	12/12/22	-	-	-	-	-	-	-	-	-	-	-	-	-		8.72	8.58
	03/20/23	-	-	-	-	-	-	-	-	-	-	-	-	-		8.80	8.50
	06/22/23	-	-	-	-	-	-	-	-	-	<0.01	-	-	-		8.80	8.50
MW-5	06/27/19	<250	<250	<100	<1	<1	<1	<3	<1	<1	-	<1	<0.1	-	*17.16*	9.20	7.96
	09/06/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.88	7.28
	12/02/19	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	<0.1		9.63	7.53
	09/25/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.42	7.74
	12/19/20	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.29	8.87
	03/17/21	<50	<100	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.19	8.97
	06/17/21	<100	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.78	8.38
	09/21/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		9.93	7.23
	12/08/21	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		7.95	9.21
	03/31/22	<250	<250	**140**	<1	<1	<1	<3	-	-	-	-	-	-		8.47	8.69
	06/01/22	<250	<250	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.11	9.05
	09/28/22	-	-	-	-	-	-	-	-	-	-	-	-	-		9.90	7.26
	12/12/22	-	-	-	-	-	-	-	-	-	-	-	-	-		8.63	8.53
	03/20/23	-	-	<100	<1	<1	<1	<3	-	-	-	-	-	-		8.68	8.48
	06/22/23	-	-	-	-	-	-	-	-	-	<0.01	-	-	-		8.71	8.45

Notes:

-	Contaminant not analyzed
5.9	Bold number(s) indicate contaminant detected
31	Bold and red number(s) indicate concentration above MTCA Method A cleanup level

Table 4b
BSE Groundwater Analytical Data - Sulfate and Nitrate
Bud Clary Subaru
961 Commerce Avenue, Longview, WA

Monitoring Well	Sample Date	Sulfate (mg/L)	Nitrate (mg/L)
Water Quality 173-200 WAC		*250*	*10*
MW-1	06/27/19	-	-
	09/10/19	-	-
	12/02/19	-	-
	03/17/21	-	-
	06/17/21	**75**	<0.10
	09/21/21	**19.7**	<0.10
	12/08/21	**31.4**	**0.225**
	03/31/22	**45.1**	**0.37**
	06/01/22	**43.8**	**0.673**
	09/28/22	**28.3**	**0.108**
	12/12/22	**49.2**	**0.278**
	03/20/23	**63.4**	**1.12**
	06/22/23	**37.3**	**0.885**
MW-2	06/27/19	-	-
	09/10/19	-	-
	12/02/19	-	-
	03/17/21	-	-
	06/17/21	**460**	**0.31**
	09/21/21	**400**	<0.10
	12/08/21	**361**	**0.222**
	03/31/22	**198**	<0.10
	06/01/22	**141**	**0.116**
	09/28/22	**189**	<0.025
	12/12/22	**202**	**0.537**
	03/20/23	**264**	**0.188**
	06/22/23	**242**	**0.219**

Table 4b
BSE Groundwater Analytical Data - Sulfate and Nitrate
Bud Clary Subaru
961 Commerce Avenue, Longview, WA

Monitoring Well	Sample Date	Sulfate (mg/L)	Nitrate (mg/L)
Water Quality 173-200 WAC		*250*	*10*
MW-3	06/27/19	-	-
	09/10/19	-	-
	12/02/19	-	-
	03/17/21	-	-
	06/17/21	**330**	**0.26**
	09/21/21	**790**	<0.10
	12/08/21	**197**	**0.418**
	03/31/22	**122**	<0.10
	06/01/22	**52.9**	**0.228**
	09/28/22	**198**	<0.025
	12/12/22	**96.5**	**0.259**
	03/20/23	**98.8**	**0.259**
	06/22/23	**129**	**0.128**
MW-4	06/27/19	-	-
	09/10/19	-	-
	12/02/19	-	-
	03/17/21	-	-
	06/17/21	**10.5**	**0.41**
	09/21/21	**16.5**	**0.49**
	12/08/21	**6.66**	**0.693**
	03/31/22	**2.37**	**0.39**
	06/01/22	**2.64**	**0.465**
	09/28/22	**6.94**	**1.84**
	12/12/22	**1.39**	**0.344**
	03/20/23	**1.49**	**0.384**
	06/22/23	**2.57**	**0.836**

Table 4b
BSE Groundwater Analytical Data - Sulfate and Nitrate
Bud Clary Subaru
961 Commerce Avenue, Longview, WA

Monitoring Well	Sample Date	Sulfate (mg/L)	Nitrate (mg/L)
Water Quality 173-200 WAC		*250*	*10*
MW-5	06/27/19	-	-
	09/10/19	-	-
	12/02/19	-	-
	03/17/21	-	-
	06/17/21	-	-
	09/21/21	**760**	<0.10
	12/08/21	**113**	<0.10
	03/31/22	**119**	<0.10
	06/01/22	**133**	<0.050
	09/28/22	**234**	<0.025
	12/12/22	**80.5**	<0.25
	03/20/23	**95.8**	**0.026**
	06/22/23	**75.4**	**0.078**

Notes:

-	Contaminant not analyzed
5.9	Bold number(s) indicate contaminant detected
760	Bold and red number(s) indicate concentration above 173-200 WAC Water Quality Standards
<0.10	Less than laboratory reporting limit

Table 4c
Bud Clary Subaru
Groundwater Parameters (1)

Blue Sage Environmental, Inc.
Kennewick, WA
(509) 947-4059

Well Number	Sample Date	Temperature (ºC)	Conductivity (ms/cm^2)	Conductivity (µS/cm)	Dissolved Oxygen (%)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential
MW-1	9/25/20	16.15	0.404	336	8.4	0.81	6.09	41.3
	12/19/20	13.42	0.358	279	29.1	2.99	6.38	67.2
	3/17/21	13.12	0.336	--	45.5	4.78	6.43	12.3
	6/17/21	15.55	0.345	284	7.5	0.74	5.93	92.9
	9/21/21	17.41	0.473	--	--	0.29	6.25	-37.0
	12/8/21	13.24	0.364	282	9.2	0.95	6.45	-17.1
	3/31/22	13.60	--	314	11.3	1.20	6.37	100.7
	6/1/22	14.19	0.259	326	27.8	2.63	6.41	-15.2
	9/28/22	13.81	0.324	255	4.8	0.50	6.12	-15.2
	12/12/22	15.57	0.193	235.0	11.6	1.14	--	40.2
	3/20/23	13.39	0.326	254	16.7	1.74	6.43	-69.7
	6/22/23	14.18	0.240	--	2.5	0.25	6.39	90.7
MW-2	9/25/20	18.24	1.878	16.0	6.6	0.68	6.57	-65.2
	12/19/20	14.42	0.685	548.0	17.1	1.74	6.45	82.9
	3/17/21	13.00	1.071	--	11.9	1.25	6.34	13.0
	6/17/21	17.07	1.307	1,109	18.8	1.82	5.98	97.5
	9/21/21	19.70	1.810	--	--	0.38	6.63	-99.0
	12/8/21	13.84	1.107	869	8.1	0.82	6.30	-8.9
	3/31/22	13.90	--	596	17.8	1.84	6.20	112.5
	6/1/22	14.77	0.394	491	19.8	1.95	6.18	15.9
	9/28/22	14.54	1.296	1,037	3.4	0.35	6.49	-54.2
	12/12/22	15.76	0.366	445.0	26.6	2.64	--	72.3
	3/20/23	13.15	0.656	507	26.7	2.80	6.36	-67.2
	6/22/23	16.44	0.658	--	21.7	2.19	6.26	116.8
MW-3	9/25/20	16.06	2.123	1,762	10.9	1.10	6.47	-28.3
	12/19/20	13.36	0.601	468	20.1	2.00	6.47	63.6
	3/17/21	11.63	0.879	--	90.6	9.84	6.21	65.1
	6/17/21	15.10	0.754	611	50.2	5.01	5.97	96.7
	9/21/21	18.18	1.760	--	--	0.13	6.54	-82.0
	12/8/21	11.72	0.566	422	7.4	0.79	6.15	26.8
	3/31/22	12.40	--	372	49.2	5.25	6.10	137.7
	6/1/22	13.72	0.175	222	39.6	4.10	6.05	32.9
	9/28/22	13.28	0.876	680	3.3	0.35	6.20	-26.7
	12/12/22	13.40	0.199	266.0	41.2	4.31	--	81.9
	3/20/23	11.70	0.319	238	49.3	5.35	6.18	-66.0
	6/22/23	14.51	0.400	--	22.9	2.33	6.20	126.0
MW-4	9/25/20	15.81	0.813	672	18.1	1.96	6.20	13.6
	12/19/20	12.40	0.147	111.0	53.1	5.69	6.71	30.9
	3/17/21	10.46	0.145	--	92.8	10.44	6.61	58.7
	6/17/21	14.64	0.085	68.0	48.4	4.92	6.32	70.4
	9/21/21	18.33	0.142	--	--	3.22	6.17	24.0
	12/8/21	9.74	0.088	62.0	47.1	5.33	6.51	28.6
	3/31/22	10.7	--	44.1	66.2	7.34	6.69	118.2
	6/1/22	12.09	0.038	51.0	57.0	6.12	6.57	41.0
	9/28/22	13.35	0.103	80.0	2.9	0.30	6.21	-29.4
	12/12/22	10.56	0.031	42.0	77.4	8.62	--	119.1
	3/20/23	8.90	0.055	37	86.1	9.99	6.64	-71.3
	6/22/23	13.00	0.058	--	3.6	0.38	6.48	129.1
MW-5	9/25/20	16.28	0.739	616	3.2	0.32	6.49	-72.0
	12/19/20	13.60	0.625	489.0	16.9	1.79	6.49	97.5
	3/17/21	12.98	1.636	--	32.4	3.39	6.59	-121.7
	6/17/21	15.46	1.505	1,230	5.2	0.52	6.20	31.0
	9/21/21	16.90	1.380	--	--	0.01	6.37	-96.0
	12/8/21	12.37	0.684	518	1.6	0.17	6.61	-115.3
	3/31/22	13.00	--	661	1.8	0.18	6.62	-89.0
	6/1/22	13.85	0.549	697	4.2	0.43	6.57	-85.6
	9/28/22	13.35	0.734	571	2.4	0.25	6.50	-83.7
	12/12/22	14.55	0.361	451	7.3	0.74	--	-114.7
	3/20/23	12.84	0.521	400	5.4	0.57	6.84	-154.2
	6/22/23	14.01	0.593	--	2.3	0.23	6.69	-116.0

Notes: (1) Parameters at time of sample collection.

Table 5
BSE Soil-Gas Analytical Data
Bud Clary Subaru
961 Commerce Avenue, Longview, WA

Boring / Location Identifier	Sample Date	Sample Name	Sample Depth (ft)	APH [EC5-8 aliphatics] Fraction	APH [EC9-12 aliphatics] Fraction	APH [EC9-10 aromatics] Fraction	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total Petroleum Hydrocarbons (TPH) (1)
Laboratory Units Reported in ug/m3												
MTCA Method B Sub-Slab Soil-Gas Screening Levels (2), Non cancer				**†**	**†**	**†**	**46**	**460**	**76,000**	**15,000**	**1,500**	**4,700**
MTCA Method B Sub-Slab Soil-Gas Screening Levels (2), Cancer				**†**	**†**	**†**	**2.5**	**11**	**†**	**†**	**†**	
SV-1	4/20/2021	SV-1	5	**460**	**190**	<120	**1.5**	<1.5	<90	<2.1	<4.2	**760**
	6/18/2021	SV-1	5	<370	**160**	<120	<1.3	<1.6	<92	<2.1	**10.8**	**464**
SV-2	4/20/2021	SV-2	5	**550**	**200**	<130	<1.4	<1.7	<100	<2.3	<4.7	**870**
	6/18/2021	SV-2	5	<400	**220**	<130	<1.4	<1.7	<100	**3.5**	**5.9**	**546**

Notes:

Analysis Methods: EPA TO-15 and MA-APH. See Laboratory reports for specifics.

(1) TPH Generic Cleanup Level, sum of all analyzed petroleum compounds. For analytes with non-detects, half of the reporting limit was used for the Total TPH calculation.

(2) MTCA Method B Soil-Gas Screening Levels, for Sub-Slab samples collected beneath a building slab or samples shallower than 15 feet deep below ground surface. Screening levels taken from Ecology's February 2021 CLARC Tables.

<0.02 Not Detected, concentration less than the laboratory method detection limit.

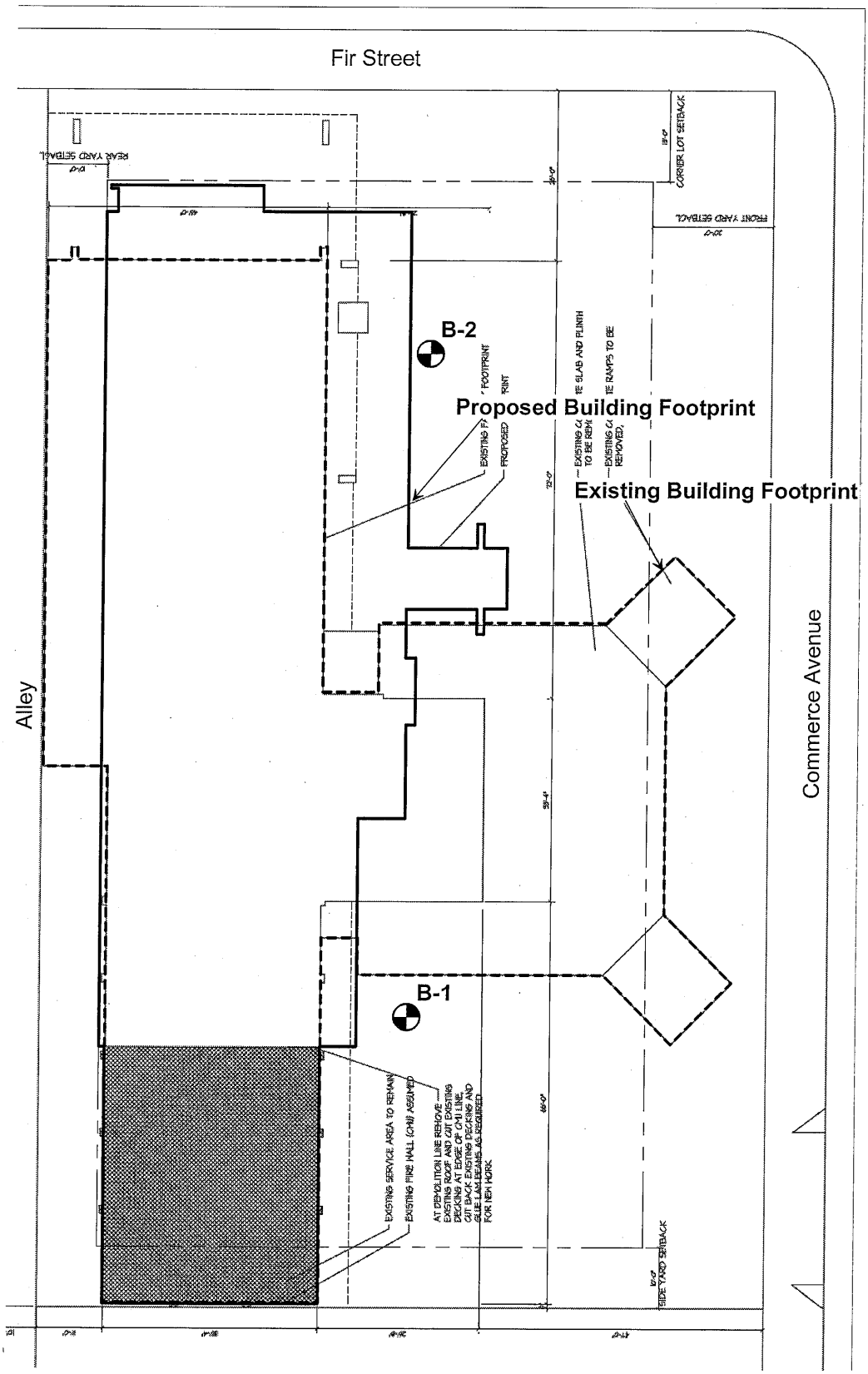
12 Bold Number(s) indicates contaminant detected.

33 Red Bold Number(s) and red text indicates concentrations exceeding Ecology's published Sub-Slab Soil Gas Screening Levels.

APPENDIX A

Geotech Consultants, Inc.
Boring Logs

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632



Legend:

Test Boring Location

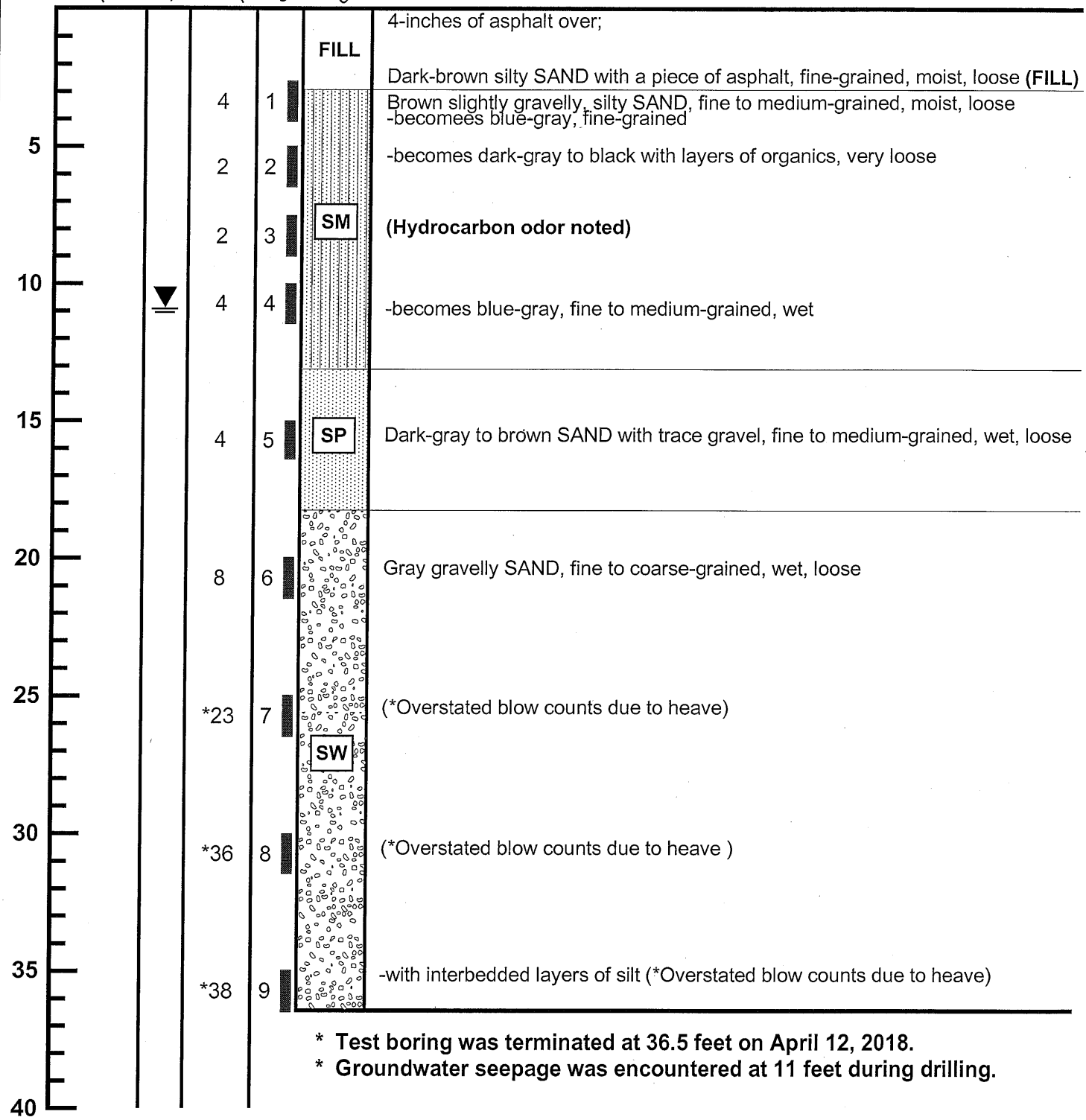
GEOTECH CONSULTANTS, INC.

SITE EXPLORATION PLAN

961 Commerce Avenue
Longview, Washington

Job No:	Date:		Plate:
18159	May 2018	No Scale	2

BORING 2



* **Test boring was terminated at 36.5 feet on April 12, 2018.**
* **Groundwater seepage was encountered at 11 feet during drilling.**

GEOTECH CONSULTANTS, INC.

BORING LOG

961 Commerce Avenue
Longview, Washington

Job	Date:	Logged by:	Plate:
18159	May 2018	MKM	5

APPENDIX B

Environmental Partners, Inc.
Boring Logs

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-1

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP	POORLY-GRADED SAND; grayish-brown; dry; loose; few gravel; trace roots					
1							
2	SP-SM	POORLY-GRADED SAND WITH SILT; strong brown; damp; medium density	80	0.1			
3							
4				0.2			
5	ML	SILT; dark reddish brown; medium stiff; medium plasticity; moist					
6				0.2			
7			100				
8				0.2			
9	SP-SM	POORLY-GRADED SAND WITH SILT; grayish-brown; wet; loose					
10					SB-1:10		
11	ML	SILT; dark reddish brown; medium stiff; moist; medium plasticity					
12		POORLY-GRADED SAND WITH SILT; dark olive gray; wet; loose	100	0.3	SB-1:12		
13	SP-SM						
14				0.3			
15		End of Borehole					

NOTES: Depth to water at time of drilling = 9.3' bgs; No odor observed in boring; no visible signs of impact. Screen from 9'-13'

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-2

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; loose; damp; medium density	70	0.3 (no odor)			
1							
2							
3				0.4 (no odor)	SB-2:4		
4							
5							
6	ML	SILT; dark gray; moist; medium stiff; medium plasticity	100	0.1 (no odor)			
7							
8	SP-SM	POORLY-GRADED SAND WITH SILT; dark reddish brown; moist; medium density; increased sand content		0.3 (no odor)	SB-2:8		
9		Color changes back to gray		0.2 (no odor)			
10		9.5'-13' dark gray, wet, poorly-graded sand with silt; loose; slight odor at 13'	100				
11							
12				0.4 (no odor)			
13					SB-2:13		
14	ML	SILT; dark gray; wet; soft; medium plasticity; minor sand		0.2 (no odor)			
15	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose End of borehole					

NOTES: Depth to water at time of drilling = 9.6' bgs. Screen approximately 9'-13'.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-3

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; loose; damp; few cobbles in upper 0.5"					
1							
	SP	POORLY-GRADED SAND; dark reddish brown; loose; damp					
2	ML	SILT; reddish brown; moist; medium stiff; medium plasticity		0.3			
3		POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose	60				
4				0.4 (no odor)			
5	SP-SM						
6				0.4			
7			100				
8		SILT WITH SAND; grayish brown; medium stiff; medium plasticity; moist; 8'-8.5' less sand and reddish brown		0.4	SB-3:8		
9	ML						
10				0.4	SB-3:10		
11		11'-11.5' more sand					
		POORLY-GRADED SAND; dark gray; loose; moist		0.6 (strong odor)			
12			100				
13	SP				SB-3:13		
14				0.7			
15							

NOTES: Depth to water at time of drilling = 9.4'. Screen approximately 9'-13'.

ENVIRONMENTAL PARTNERS INC	BORING ID: SB-4	
SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**	
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**	
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**	
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:	DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP	POORLY-GRADED SAND; dark brown; damp; loose; no odor; few silt; trace gravel					
1							
2	SP-SM	POORLY-GRADED SAND WITH SILT; strong brown; damp; loose; no odor	NM	0.7 (no odor)			
3							
4				1.5 (no odor)	SB-4:4		
5	ML	SILT; dark gray; medium stiff; medium plasticity; slight odor					
6				2.3 (no odor)			
7		slight odor	NM				slight odor
8				214.0	SB-4:8		
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; strong odor at 10'		383.0			
11		strong odor					strong odor
12	ML	SILT WITH SAND; dark gray; wet; medium stiff; medium plasticity; visible product - very strong odor	NM	55.4 (strong odor)			
13	SP-SM	POORLY-GRADED SAND WITH SILT; strong odor at 10' strong odor					strong odor
14		WELL-GRADED SAND; dark gray; wet; loose; few gravel; no odor		12.6			
15							
16	SW-SM	Organic lens at 16' - pieces of wood/bark		1 (slight odor)	SB-4:16		
17			NM				
18				2.1 (slight odor)			
19							
20		Slight odor at 20'; End of borehole		1.1			

NOTES: Depth to water 10.1'. NM - Not Measured

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-5

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP-SM	POORLY-GRADED SAND WITH SILT; loose; damp	60	0.5 (no odor)			
2							
3							
4				0.9 (no odor)	SB-5:4		
5							
6	ML	SILT; reddish gray; medium stiff; medium plasticity; no odor	60	0.7 (no odor)			
7							
8		Density decreases to soft at 8' bgs		0.8 (no odor)	SB-5:8		
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; moist; loose; slight odor		0.8 (no odor)			
11							
12	ML	SILT; dark gray; wet; medium stiff; medium plasticity; no odor	60	1.1 (no odor)			
13	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; moist; loose; no odor; trace gravel; few silt					
14				0.7 (no odor)			
15							
16	SW-SM	WELL-GRADED SAND; dark gray; wet; loose; no odor; few silt; few rounded gravels	NM	0.7 (no odor)	SB-5:16		
17							
18				0.9 (no odor)			
19							
20		End of borehole		0.8	SB-5:20		

NOTES: Depth to water 9.6'. NM - Not Measured

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-6

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose; moslty fine sand with few silt; no odor	60	0.6 (no odor)			
2							
3							
4				0.8 (no odor)	SB-6:4		
5							
6	ML	SILT; reddish gray; damp; medium stiff; medium plasticity; few find sand; strong odor at 8'	90	4 (slight odor)			
7							
8				56.1 (slight odor)	SB-6:8		
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; moist; loose; moslty mine sand with some silt		259.4 (Strong odor)			
11							
12	ML	SILT; dark gray; wet; medium stiff; medium plasticity; silt with few fine sand, visible product	95	223.2 (strong odor)	SB-6:12	Visible sheen	
13		POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; moslty fine sand with few silt; strong odor; visible sheen on sand					
14				14.2 (Strong odor)			
15							
16	SP-SM			1.8 (no odor)	SB-6:16		
17							
18			NM	1.5 (no odor)		Visible sheen	
19							
20		End of borehole		1.6 (no odor)	SB-6:20		

NOTES: Depth to water 9.7'. NM - Not Measured

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-7

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; loose; damp; construction debris 0-0.5'	80	1.2 (no odor)			
4				1.2 (no odor)	SB-7:4		
6	ML	SILT; dark gray; moist; stiff; medium plasticity	80	1.3 (no odor)			
8				1.4 (no odor)	SB-7:8		
9		Softer and increased sand content Wet at 9.5'					
10				72.3 (slight odor)	SB-7:10		
12			90	2.7 (slight odor)	SB-7:12		
13	SP-SM	POORLY-GRADED SAND; dark gray; mostly loose; coarse grained; moist					
14				2.3			
15		End of borehole			SB-7:15		

NOTES: Depth to water at time of drilling = 9.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-8

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–3	SP	POORLY-GRADED SAND; dark reddish brown; damp; loose; construction debris 0-0.5'; no odor	60	0.4 (no odor)			
3–5	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose; no odor		1.1 (no odor)	SB-8:4		
5–9	ML	SILT; dark gray; moist to wet; stiff	75	1 (no odor)			
				107.1 (strong odor)	SB-8:8		
		Increasing sand		105.8 (strong odor)			
10–13		Wet at 10.5'	95				
		Low plasticity		11.9 (strong odor)	SB-8:12		
13–16	SP	POORLY-GRADED SAND; dark gray; wet; loose; no odor		5.5 (no odor)			
16–20	SW	WELL-GRADED SAND; wet; dark gray; loose; trace to few gravels	100	3 (slight odor)	SB-8:16	Visible sheen	
		Increasing gravels		1.1 (slight odor)			
		End of borehole		0.8 (slight	SB-8:20		

NOTES: Depth to water at time of drilling = 9.7' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-9

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	Asphalt					
1		POORLY-GRADED SAND WITH SILT AND GRAVEL; dark reddish brown; loose; no odor; dry					
2		POORLY-GRADED SAND WITH SILT; damp; strong brown; loose; no odor, mostly fine sand with minor silt	60	0.4 (no odor)			
3	SP-SM						
4				0.5 (no odor)	SB-9:4		
5							
6		SILT; moist; strong brown; medium stiff; medium plasticity; mostly silt with trace fine sand; no odor		0.5 (no odor)			
7	ML						
8		Color changes to dark gray 8'	65	0.7 (no odor)	SB-9:8		
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; reddish gray; wet; medium density		10.3 (slightodor)	SB-9:10		
11							
12	ML	SILT; wet; dark gray; medium stiff; medium plasticity; mostly silt with few fine sand	80	0.8 (no odor)	SB-9:12		
13		POORLY-GRADED SAND WITH SILT; reddish gray; wet; mostly fine sand with few silt; no odor					
14		Strong reddish brown		0.7 (no odor)			
15							
16	SP-SM			0.7 (no odor)	SB-9:16		
17			100				
18				0.6 (no odor)			
19							
20		End of borehole		0.6 (no odor)	SB-9:20		

NOTES: Depth to water 9.6'.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-10

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	POORLY-GRADED SAND WITH SILT; damp; grayish brown; loose; moslty fine sand with few silt; no odor	70	0.4 (no odor)			
3	ML	SILT; moist; reddish brown; medium stiff; medium plasticity; oxidation present; no odor		0.6 (no odor)	SB-10:4		
5	SP-SM	POORLY-GRADED SAND WITH SILT; damp; dark gray; loose; no odor	90	0.4 (no odor)			
7		Wet at 7.5'		0.6 (no odor)	SB-10:8		
9		Some silt					
10		Coarse grained sand with few silt		0.7 (slight odor)	SB-10:10		
12			90	0.5 (no odor)			
14				0.5 (no odor)	SB-10:14		
15		End of borehole					

NOTES: Depth to water at time of drilling = 7.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-11

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP	POORLY-GRADED SAND; dry; brown; loose; no odor					
1							
2		SILT; reddish gray; redox reactions; medium stiff; medium plasticity		0.4 (no odor)			
3	ML		95				
4				0.5 (slight odor)	SB-11:4		
5		POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; mostly fine sand with minor silt					
6				0.6 (no odor)			
7							
8	SP-SM		85	0.8 (slight odor)	SB-11:8		
9							
10				0.6 (slight odor)	SB-11:10		
11							
12		WELL-GRADED SAND; wet; dark gray; loose; no odor; coarse sand with trace silt	85	1.4 (slight odor)			
13	SW						
14				0.7 (slight odor)	SB-11:14		
15		End of borehole					

NOTES: Depth to water 7.4'.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-12

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/23/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	POORLY-GRADED SAND WITH SILT; dry; brown; loose; no odor; few silt					
1							
2				0.7 (no odor)			
3	ML	SILT; damp; dark gray; medium stiff; medium density; no odor; trace sand	80				
4				0.8 (no odor)			
5							
6	SP-SM	POORLY-GRADED SAND WITH SILT; moist; dark gray; medium stiff		196 (strong odor)	SB-12:6		
7			80				
8				120 (strong odor)	SB-12:8		
9		Wet at 9' strong odor					strong odor
10				2.2 (slight odor)			
11							
12				1.4 (no odor)			
13	SW	WELL-GRADED SAND; dark gray; loose; mostly coarse sand with trace silt; no odor	75				
14				0.8 (no odor)	SB-12:14		
15							

NOTES: Depth to water at time of drilling = 9' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-13

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP	POORLY-GRADED SAND; dark brown; damp; loose; no odor					
1		POORLY-GRADED SAND WITH SILT; dark reddish brown; damp; loose; no odor					
2			75	0.6 (no odor)			
3	SP-SM						
4				0.6 (no odor)	SB-13:4		
5		Moist at 5'					
6				0.7 (no odor)			
7		SILT; dark gray with red marbling in some locations; moist to wet ~10'; stiff to medium stiff at ~10'; medium plasticity; no odor	70				
8	ML			0.7 (no odor)	SB-13:8		
9							
10				1.1 (no odor)			
11		WELL-GRADED SAND WITH GRAVEL; dark gray with red pieces throughout; wet; loose; few gravels increasing with depth; no odor					
12			80	1.8 (no odor)	SB-13:12		
13							
14				0.7 (no odor)			
15	SW						
16				0.7 (no odor)	SB-13:16		
17			100				
18				0.8 (no odor)			
19							
20				1 (no odor)	SB-13:20		

NOTES: Depth to water at time of drilling = 9.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-14

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP	POORLY-GRADED SAND; strong brown; loose; damp; no odor					
2	ML	SILT; with sand; dark gray; damp; soft; non-plastic; no odor	75	1.1 (no odor)			
3							
4		SILT; damp; dark gray; medium density; medium plastic; trace sands		1.2 (slight odor)	SB-14:4		
5	ML						
6		SILT; dark gray; moist; soft; medium plastic		5.3 (strong odor)			
7			100				
8	ML			31.7 (strong odor)	SB-14:8		
9							
10		SILT; sandy silt; dark gray; wet; soft; non-plastic		80.1 (strong odor)			
11							
12	ML		75	97.2 (strong odor)	SB-14:12	Visible sheen	
13							
14		WELL-GRADED SAND; reddish brown (14-16'); dark gray with red pieces (16-20'); wet; loose; no odor		87.9 (strong odor)			
15							
16	SW			1.7 (no odor)	SB-14:16		
17			90				
18				1.6 (no odor)			
19							
20				1.6 (no odor)	SB-14:20		

NOTES: Depth to water at time of drilling = 9.7' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-15

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; damp; loose; no odor	60	1.1 (no odor)			
4				1 (no odor)	SB-15:4		
5	ML	SILT; dark gray; damp; medium stiff; medium plastic; trace sands	90	1.2 (slight odor)			
7		SILT; dark gray; moist; soft; medium plastic; trace sands		44.6 (strong odor)	SB-15:8		
10	ML	SILT; with some sand; dark gray; wet; soft; nonplastic; sand with increasing depth;	80	66.4 (strong odor)	SB-15:10		
12				61.3 (strong odor)			
13	SW-SM	WELL-GRADED SAND WITH SILT; dark gray with red from 13-14'; wet; loose		15.1 (slight odor)	SB-15:14		
16	SW	WELL-GRADED SAND; with gravel; dark gray with red pieces throughout; wet; loose; gravels increase with depth	90	2.2 (slight odor)			
18				7 (slight odor)			
20		No odor		1.8 (no odor)	SB-15:20		

NOTES: Depth to water at time of drilling = 9.6' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-16

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP	POORLY-GRADED SAND; dry; loose; light reddish brown; no odor					
1							
2	ML	SILT; reddish brown; moist; medium stiff; high plasticity; no odor	80	1.3 (no odor)			
3							
4	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose; no odor		1.2 (no odor)	SB-16:4		
5							
6				1.2 (no odor)			
7	ML	Silt; with sand; dark gray; moist; very soft; non-plastic; no odor	90				
8				1.3 (no odor)	SB-16:8		
9							
10				1.5 (no odor)			
11	SW	WELL-GRADED SAND; dark gray with red pieces; wet; loose; increase of gravel from trace to some from 14-20'.					
12			80	1.5 (slight odor)	SB-16:12		
13							
14				1.5 (no odor)			
15				1.4 (no odor)			
16				1.3 (no odor)	SB-16:16		
17			80				
18				1.5 (no odor)			
19							
20				1.4 (no odor)			

NOTES: Depth to water at time of drilling = 7.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-17

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–3	ML	SILT; with sand; dark reddish brown; damp; medium stiff; medium plastic; fine-grained sand content increasing with depth	90	0.8 (no odor)			
4				0.8 (no odor)	SB-17:4		
5–6			90	1 (no odor)			
7–8	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; medium dense		1.1 (no odor)	SB-17:8		
9–10				1 (no odor)			
11–15	SW	WELL-GRADED SAND; dark gray with red pieces; wet; loose; increasing gravel with depth starting at 16'; increasing particle size with depth	75	1.5 (no odor)	SB-17:12		
14				1.1 (no odor)			
16			90	0.9 (no odor)	SB-17:16		
17–18				1 (no odor)			
19–20				1.7 (no odor)			

NOTES: Depth to water at time of drilling = 7.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-18

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose; no odor					
1	ML	SILT; dark gray; damp; medium stiff; low plasticity; no odor					
2			75	0.5 (no odor)			
3	ML						
4				0.8 (no odor)	SB-18:4		
5		POORLY-GRADED SAND WITH SILT; dark gray; moist; medium density; no odor					
6				0.3 (no odor)			
7	SP-SM		80				
8				0.1 (no odor)	SB-18:8		
9		SILT; with sand; dark gray; moist; soft; medium plastic; no odor					
10				0.5 (no odor)			
11		WELL-GRADED SAND; dark gray with red pieces; wet loose; increasing gravel with depth starting at around 16'; increasing particle grain size with depth; no odor					
12				0.2 (slight odor)	SB-18:12		
13			80				
14	SW	Reddish brown 10-15'		0.3 (no odor)			
15							
16				0.1 (no odor)	SB-18:16		
17			95				
18				0.1 (no odor)			
19							
20				0.1 (no odor)			

NOTES: Depth to water at time of drilling = 7.6' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-19

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose; no odor					
1	ML	SILT; dark gray; damp; medium stiff; low plasticity; no odor					
2			90	0.7 (no odor)			
3							
4	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; moist; medium density; no odor		1.2 (no odor)	SB-19:4		
5							
6				1 (no odor)			
7			90				
8	ML	SILT; with sand; dark gray; moist; soft; medium plastic; no odor		1.4 (no odor)	SB-19:8		
9							
10				1.3 (no odor)			
11	SW	WELL-GRADED SAND; dark gray with red pieces; wet loose; increasing gravel with depth starting at around 16'; increasing particle grain size with depth; no odor					
12			75	1.2 (no odor)	SB-19:12		
13							
14		Reddish brown from 10-15' bgs		1.1 (no odor)			
15							
16				1 (no odor)	SB-19:16		
17			80				
18				1 (no odor)			
19							
20		End of borehole		0.9 (no odor)			

NOTES: Depth to water at time of drilling = 7.7' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-20

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs**

DECOMMISSIONING MATERIAL: **Bentonite Clay**

BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	Crushed asphalt					
1		POORLY-GRADED SAND WITH SILT; dark brown; damp; loose; mostly fine sand with minor silt					
2		SILT; dark reddish brown; moist; stiff; medium plasticity; moslty silt with trace fine sand	90	0.3 (no odor)			
3							
4				0.1 (no odor)	SB-20:4		
5	ML						
6		Decrease in density to medium stiff at 6' bgs		0.5 (no odor)			
7			90				
8				0.7 (no odor)	SB-20:8		
9		Wet at 9'					
10		POORLY-GRADED SAND; dark reddish brown; loose; mostly fine sand with minor silt		0.4 (no odor)			
11	SP						
12				0.8 (no odor)	SB-20:12		
13		POORLY-GRADED SAND; dark gray; wet; loose; mostly fine sand with few silt	75				
14	SP			0.4 (no odor)			
15							
16		WELL-GRADED SAND WITH SILT; wet; dark gray; loose; mostly coarse sand with few small rounded sand; few silt		0.5 (no odor)	SB-20:16		
17	SW-SM		95				
18				0.3 (no odor)			
19	SP-SM						
20		POORLY-GRADED SAND WITH SILT; dark gray; loose; wet; mostly fine sand with few silt		0.7 (no odor)			

NOTES: Depth to water at time of drilling = 9.4' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-21

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	SP-SM	Crushed Asphalt					
1		POORLY-GRADED SAND WITH SILT; dark brown; damp; loose; mostly fine sand with few silt					
2	ML	SILT; dark reddish brown; damp; sitff; medium plasticity; mostly silt with trace fine sand	85	1.9 (No odor)			
3							
4				2.4 (No odor)	SB-21:4		
5							
6			85	1.7 (No odor)			
7							
8				3.1 (No odor)	SB-21:8		
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; dark reddish brown; wet; loose; moslty fine sand with minor silt		2.5 (No odor)			
11	ML						
12		SILT WITH SAND; strong reddish brown; medium stiff; medium plasticity; few fine sand		2.5 (No odor)	SB-21:12		
13	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; mostly fine to medium sand with few silt	80				
14	SP-SM			2.3 (No odor)			
15		POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; mostly fine to medium sand with trace silt					
16	SW	WELL-GRADED SAND; dark gray; wet; loose; coarse sand with rounded small gravel (trace).		2.6 (No odor)	SB-22:16		
17			85				
18	SP	POORLY-GRADED SAND; wet; loose; mostly fine sand with trace silt		0.9 (No odor)			
19							
20				2.0 (No odor)			

NOTES: Depth to water at time of drilling measured at 9.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-22

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0	ML	SILT WITH SAND; dark reddish brown; damp; soft; low plasticity	65	3.2 (No odor)			
1							
2							
3	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; damp; loose; mostly fine sand with trace silt		2.6 (No odor)	SB-22:4		
4							
5	SP-SM	POORLY-GRADED SAND WITH SILT; dark reddish brown; moist; loose; mostly fine sand with some silt	90	2.3 (No odor)			
6							
7							
8	ML	SILT; dark reddish brown; wet; medium stiff; medium plasticity; silt with trace fine sand		2.3 (No odor)	SB-22:8		
9	SP-SM	POORLY-GRADED SAND WITH SILT; strong brown; wet; soft; medium plasticity; mostly fine sand with some silt					
10				1.7 (No odor)			
11			95				
12				1.5 (No odor)	SB-22:12		
13							
14				0.8 (No odor)			
15	SP	POORLY-GRADED SAND; dark gray; wet; loose; mostly fine sand with few silt					
16				0.7 (No odor)	SB-22:16		
17			100				
18				0.9 (No odor)			
19	SW	WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; small rounded gravels with even mix of coarse and fine sand; trace silt					
20		End of borehole		0.4 (No odor)			

NOTES: Depth to water at time of drilling measured at 7.8' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-23

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		POORLY-GRADED SAND WITH SILT; dark gray; dry; loose					
1	ML	SILT; dark reddish brown; damp; medium stiff; medium plasticity; silt with trace fine sand; marbled with redox features					
2			100	2.9 (No odor)			
3							
4				2.6 (No odor)	SB-23:4		
5	SP-SM	POORLY-GRADED SAND WITH SILT; dark reddish brown; moist; loose; mostly fine sand with minor silt					
6				2.0 (No odor)			
7			85				
8				1.2 (No odor)	SB-23:8		
9		POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; mostly fine sand with increased silt					
10				1.6 (No odor)			
11	SP-SM						
12			95	1.8 (No odor)	SB-23:12		
13		Wood debris from 13.5' to 14.5'					
14				2.5 (No odor)			
15		POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; mostly fine sand with few silt					
16	SP-SM			2.8 (No odor)	SB-23:16		
17			100				
18				2.7 (No odor)			
19	SW	WELL-GRADED SAND WITH SILT; dark gray; wet; loose; coarse sand with few small rounded gravel; trace silt					
20		End of borehole		1.2 (No odor)			

NOTES: Depth to water at time of drilling measured at 7.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-24

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/24/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **B. Wing**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP-SM	POORLY-GRADED SAND WITH SILT; dark reddish brown; damp; loose; mostly fine sand with minor silt	60	1.3 (No odor)			
2							
3							
4				1.4 (No odor)	SB-24:4		
5							
6			80	0.4 (No odor)			
7							
8				1.5 (No odor)			
9							
10	ML	SILT; dark gray; wet; medium stiff; medium plasticity; trace fine sand		1.9 (No odor)	SB-24:10		
11	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; mostly fine sand with minor silt					
12	ML	SILT; dark gray; wet; medium stiff; medium plasticity; trace fine sand	90	1.7 (No odor)			
13	SP-SM	POORLY-GRADED SAND WITH SILT; grayish brown; wet; loose; mostly fine sand with minor silt					
14	ML	SILT WITH SAND; grayish brown; wet; silt with mostly fine sand		1.9 (No odor)			
15							
16	SW	WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; various gravel sizes; trace silt		2.6 (No odor)	SB-24:16		
17			95				
18	SW	WELL-GRADED SAND; dark gray; wet; loose; trace silt		3.9 (No odor)	SB-24:18		
19							
20		End of borehole		2.6 (No odor)			

NOTES: Depth to water at time of drilling measured at 9.6' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-25

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Crushed Asphalt					
1	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose	0	1.3 (No odor)			
2							
3							
4				1.4 (No odor)	SB-24:4		
5							
6			80	0.4 (No odor)			
7							
8				1.5 (No odor)	SB-24:8		
9							
10		Wet from 9' to 11' bgs		1.9 (No odor)			
11	SW-SM						
12		WELL-GRADED SAND WITH SILT; dark reddish brown; wet; loose	80	1.7 (No odor)			
13	ML	SILT; dark gray; wet; medium stiff; medium plasticity					
14				1.9 (No odor)			
15	SW	WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; increased gravel concentration and grain size with depth					
16				2.6 (No odor)	SB-24:16		
17			90				
18				3.6 (No odor)	SB-24:18		
19							
20		End of borehole		2.6 (No odor)			

NOTES: Depth to water at time of drilling measured at 9.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-26

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
2	SP	POORLY-GRADED SAND; dark gray; damp; loose; no odor	60	1 (no odor)			
4	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose;		1.1 (slight odor)	SB-26:4		
6			90	1.4 (slight odor)			
8	ML	SILT WITH SAND; dark gray; moist to wet with depth; soft; medium plastic		1.5 (slight odor)	SB-26:8		
10	SP	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose; no odor		2 (no odor)			
12	SW ML	WELL-GRADED SAND WITH SILT; reddish brown; wet; loose; slight odor SILT; dark gray; wet; medium stiff; medium plasticity; no odor	80	2.2 (slight odor)	SB-26:12		
14		WELL-GRADED SAND; dark gray; wet; loose; increase gravel with depth		1.6 (no odor)			
16	SW			3.1 (slight odor)	SB-26:16		
18			90	2.5 (no odor)			
20		End of borehole		2.1 (slight odor)	SB-26:20		
22							

NOTES: Depth to water at time of drilling = 9.6' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-27

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0							
1	ML	SILT; dark gray; damp; soft; medium plasticity					
2	ML	SILT; reddish brown; damp; medium stiff; medium plastic	90	2.5 (no odor)			
3	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose		2.4 (no odor)	SB-27:4		
4							
5							
6	SP	POORLY-GRADED SAND; reddish brown; damp; loose		2.8 (no odor)			
7			80				
8	ML	SILT WITH SAND; dark gray; wet; soft; medium plastic		2.5 (no odor)	SB-27:8		
9							
10	SW	WELL-GRADED SAND; dark gray and reddish brown; wet; loose; trace silt (with reddish brown color)		2.6 (no odor)	SB-27:10		
11							
12			90	1.5 (no odor)	SB-27:12		
13							
14				1.7 (no odor)			
15		End of borehole					

NOTES: Depth to water at time of drilling = 8' - 9.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-28

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	ML	SILT; reddish brown; damp; medium stiff to soft with depth; medium plastic; trace sands increase with depth; no odor	75	2.1 (no odor)	SB-28:4		
2							
3							
4				2.5 (no odor)			
5							
6			90	1.2 (no odor)			
7							
8		SILT WITH SAND; reddish brown; moist; soft; medium plastic; no odor		2.5 (no odor)			
9	ML						
10		WELL-GRADED SAND WITH SILT; dark gray and reddish brown; wet; loose; no odor		2.2 (no odor)	SB-28:10		
11	SW-SM						
12			70	2.3 (no odor)			
13	ML	SILT; dark gray; wet; medium stiff; medium plastic; slight odor					
14		WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; gravels and grain size increase with depth		3.3 (slight odor)	SB-28:14		
15							
16	SW			2.5 (no odor)			
17			95				
18				2.7 (no odor)	SB-28:18		
19							
20		End of borehole		2.4 (no odor)			

NOTES: Depth to water at time of drilling = 9.6' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-29

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; damp; loose					
2			75	1.3 (slight odor)			
3							
4	SP-SM			0.5 (slight odor)	SB-29:4		
5	ML	POORLY-GRADED SAND WITH SILT; damp; reddish brown; loose; slight odor					
		SILT; dark gray; damp; medium stiff; medium plastic; no odor					
6	ML	SILT; reddish brown; damp; medium stiff; medium plastic; trace sands		2.4 (no odor)			
7							
8	ML	SILT WITH SAND; dark gray; moist; medium stiff; medium plastic	90	2.3 (slight odor)	SB-29:8		
9							
10				2.3 (slight odor)			
11	SW-SM	WELL-GRADED SAND WITH SILT; reddish brown; wet; loose					
12			NM	1 (slight odor)	SB-29:12		
13	ML	SILT; dark gray; medium stiff; wet; medium plastic; no odor					
14		WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; gravels and grain size increase with depth		2.3 (no odor)			
15							
16	SW			1.1 (slight odor)	SB-29:16		
17			NM				
18				1.9 (no odor)			
19							
20		End of borehole		1.3 (no odor)			

NOTES: Depth to water at time of drilling = 9.6' bgs. NM - Not Measured

ENVIRONMENTAL PARTNERS INC		**BORING ID: SB-30**	
SITE ADDRESS **961 Commerce Avenue, Longview, WA**		CLIENT: **CCS**	
DRILLING CONTRACTOR: **ESN**		PROJECT #: **75104**	
DRILLING EQUIPMENT: **Powerprobe 9100**		DATE: **7/25/2018**	
DRILLING METHOD: **Direct Push Technology**		GROUND SURFACE ELEV. FT AMSL:	DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**		TOTAL DEPTH: **20' bgs**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SW	WELL-GRADED SAND; reddish brown; damp; loose; no odor					
2	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; loose	75	0.9 (no odor)			
3							
4	ML	SILT WITH SAND; dark gray; damp; stiff; medium plastic		2.4 (no odor)			
5							
6	ML	SILT; dark gray; moist to wet; stiff; medium plastic	90	4.8 (no odor)	SB-30:6		
7							
8				2.5 (no odor)			
9	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose					
10				3.5 (no odor)	SB-30:10		
11	ML						
12		SILT; reddish brown; wet; medium stiff; medium plastic; no odor	90	3.3 (no odor)			
13	SW	WELL-GRADED SAND; reddish brown; wet; loose; some gravel					
14				2.7 (no odor)	SB-30:14		
15							
16		Changes to dark gray at 16', increase gravel grain size with depth	100	2.1 (slight odor)			
17							
18				0.7 (no odor)	SB-30:18		
19							
20		End of borehole		0.8 (no odor)			

NOTES: Depth to water at time of drilling = 9.6' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-31

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–1	SP	POORLY-GRADED SAND; reddish gray; damp; loose					
1–2				2.2 (slight odor)	SB-31:2		
2–3	ML	SILT; dark gray; damp; medium stiff; medium plastic	70				
3–4				1.8 (slight odor)			
4–5							
5–6				1.1 (slight odor)	SB-31:6		
6–7	ML	SILT WITH SAND; dark gray; moist; medium stiff; medium plastic	80				
7–8				0.6 (slight odor)			
8–9							
9–10	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose		1.1 (strong odor)	SB-31:10		
10–11							
11–12			80	0.6 (slight odor)			
12–13							
13–14	SW	WELL-GRADED SAND; reddish brown; wet; loose; trace silt; WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; increase gravel and grain size with depth		0.5 (slight odor)	SB-31:14		
14–15							
15–16				0.4 (slight odor)			
16–17	SW						
17–18			100	0.5 (slight odor)	SB-31:18		
18–19							
19–20				0.2 (no odor)			
20		End of borehole					

NOTES: Depth to water 8.0'.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-32

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose	60	3.9 (no odor)			
2							
3							
4				3.1 (no odor)			
5							
6				5 (no odor)	SB-32:6		
7	ML	SILT; dark gray; moist; medium stiff; medium plastic	60				
8				3.5 (no odor)			
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose		5.2 (no odor)	SB-32:10		
11							
12	ML	SILT; dark gray; wet; medium stiff; medium plastic	NM	3.7 (no odor)			
13	SW	WELL-GRADED SAND; reddish brown; wet; loose; trace silt					
14		WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; increase gravel and grain size with depth		4.3 (no odor)	SB-32:14		
15							
16	SW			2.8 (no odor)			
17			NM				
18				3.3 (no odor)	SB-32:18		
19							
20		End of borehole		3.5 (no odor)			

NOTES: Depth to water at time of drilling = 9.6' bgs. NM - Not Measured

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-33

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP	POORLY-GRADED SAND; reddish brown; damp; loose; trace gravels; no odor					
2			70	2.3 (no odor)			
3	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose; no odor					
4				2.1 (no odor)			
5							
6	ML	SILT; reddish brown (6-7' and 8-9'); dark gray (7-8' and 9-9.5'); moist; medium stiff; medium plastic		4.5 (no odor)	SB-33:6		
7			95				
8				6.2 (slight odor)			
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; dark gray; wet; loose		16.3 (strong odor)	SB-33:10	Visible sheen at 10'	
11							
12	ML	SILT; dark gray; wet; medium stiff; medium plastic	90	2.7 (slight odor)	SB-33:12		
13	SW	WELL-GRADED SAND; reddish brown; wet; loose; no odor					
14		WELL-GRADED SAND WITH GRAVEL; dark gray; wet; loose; increase gravels and grain size with depth		2.4 (no odor)			
15							
16	SW			2.6 (no odor)	SB-33:16		
17			100				
18				3.2 (no odor)			
19							
20				2.6 (no odor)			

NOTES: Depth to water at time of drilling = 9.6' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-34

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **15' bgs**

DECOMMISSIONING MATERIAL: **Bentonite Clay**

BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0–2	SP	POORLY-GRADED SAND; reddish brown; dry; loose; damp at 0.25'; no odor	70	2.5 (no odor)			
2–6	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; no odor		1.9 (no odor)	SB-34:4		
6–10	ML	SILT; reddish brown; damp; moist; medium stiff; medium plastic	5	1.1 (no odor)			
10–11	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; wet; loose; no odor	80				
11–12	ML	SILT; dark gray; wet; medium stiff; medium plastic; no odor		2.2 (no odor)			
12–13	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; wet; loose; no odor					
13–14	ML	SILT; dark gray; wet; medium stiff; medium plastic; no odor					
14–15	SW	WELL-GRADED SAND; dark gray; wet; loose; trace silt		1.9 (no odor)			

NOTES: Depth to water at time of drilling = 8.0' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-35

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **15' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP	POORLY-GRADED SAND WITH GRAVEL; damp; reddish brown; loose; trace silts; asphalt and aggregates (1-1.2' and 2.5-3'); no odor					
2			75	1.2 (no odor)			
3		POORLY-GRADED SAND WITH SILT; reddish brown; damp; loose; no odor					
4	SP-SM			1.2 (no odor)	SB-35:4		
5							
6				1 (no odor)			
7		POORLY-GRADED SAND WITH SILT; reddish brown; damp; medium dense; no odor	75				
8				1.1 (no odor)			
9	SP-SM						
10				2.3 (no odor)	SB-35:10		
11							
12		WELL-GRADED SAND; dark gray and reddish brown; wet; loose; trace silt; no odor	20				
13	SW						
14				1.4 (no odor)	SB-35:14		
15							

NOTES: Depth to water at time of drilling = 10.2' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-36

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/25/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **R. Mauldin**	TOTAL DEPTH: **15' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP	POORLY-GRADED SAND WITH GRAVEL; damp; reddish brown; loose; trace silts; asphalt (2-3')					
2			60	1.3 (no odor)			
3		POORLY-GRADED SAND WITH SILT; moist to wet (at 11'); loos to medium dense (at 11'); silt lenses of same color and dark gray at 11.5-12' and 14.5-14.75'					
4				2.4 (no odor)	SB-36:4		
5							
6				1.5 (no odor)			
7			70				
8	SP-SM			2.9 (no odor)	SB-36:8		
9							
10				2.3 (no odor)			
11							
12			75	2.6 (no odor)	SB-36:12		
13							
14				2 (no odor)			
15		End of borehole					

NOTES: Depth to water at time of drilling = 9.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-37

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/31/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **W. Weisberg**	TOTAL DEPTH: **20' bgs**

DECOMMISSIONING MATERIAL: **Bentonite Clay**

BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Concrete					
1	SP	POORLY-GRADED SAND; no odor; brown; Fe-staining; loose; dry	70	0.2			
2							
3				0.0			
4							
5				0.0	SB-37:5		
6	ML	SILT; gray; no odor; dense; damp; low plasticity; trace sand; Fe-staining; minor clay	80				
7							
8							
9	SP	POORLY-GRADED SAND WITH SILT; gray; medium dense near top and loose deeper; minor sheen at ~9'; wet; no odor; some clay		13.8	SB-37:9	Visible sheen 9'	
10				1.1			
11							
12	ML	SILT WITH SAND; gray-brown; Fe-staining; medium plasticity; some clay; no odor; moist	95				
13	SP	POORLY-GRADED SAND; grey-black; moist; no odor; coarsing down; loose; low density		0.0			
14							
15				0.0	SB-37:15		
16							
17				0.0			
18			100				
19							
20				0.0	SB-37:20		

NOTES: Depth to water at time of drilling = 11.0' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-38

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/31/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **W. Weisberg**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Concrete					
1	SP	POORLY-GRADED SAND; brown; loose; no odor; dry		0.3			
2			60				
3				1.5	SB-38:3		
4							
5				0.3			
6	ML	SILT; gray and brown; Fe-staining strongly present; moist; stiff; no odor; some clay					
7			70				
8				0.0	SB-38:8		
9							
10	SP-SM	POORLY-GRADED SAND WITH SILT; wet; brown; Fe-staining; loose; no odor					
11				0.9			
12				0.3			
13	SP	POORLY-GRADED SAND; gray-black; no odor; loose; moist; coarse downward; low density	100	0.0	SB-38:13		
14							
15							
16							
17				0.0			
18			100				
19							
20				0.2	SB-38:20		

NOTES: Depth to water at time of drilling = 9.5' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-39

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**	
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**	
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/31/2018**	
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:	DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **W. Weisberg**	TOTAL DEPTH: **20' bgs**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP	POORLY-GRADED SAND; brown; no odor; loose; dry					
2				0.0			
3			50				
4				0.0			
5				0.0	SB-39:5		
6	CL	LEAN CLAY; gray brownish to white; moist to wet; very stiff; high plasticity; Fe-staining; gley clay; no odor					
7							
8			90				
9	ML	SILT WITH SAND; brown; wet; Fe-staining; medium density; sheen 9'-10'; no odor				Visible sheen '9-10'	
10				68.2	SB-39:10		
11							
12			97				
13		POORLY-GRADED SAND; gray-black; moist; loose; coarse downward; low density; no odor		0.6			
14				0.1			
15				0.0	SB-39:15		
16	SP						
17				0.0			
18			100				
19							
20		End of borehole		0.0	SB-39:20		

NOTES: Depth to water at time of drilling = 9.0' bgs.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-40

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/31/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **W. Weisberg**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Concrete					
1	SP	POORLY-GRADED SAND; brown; dry; loose		0.6			
2			70				
3				0.0			
4							
5				0.0	SB-40:5		
6				0.0			
7			NM				
8	CL	LEAN CLAY WITH SAND; reddish gray; moist; stiff; medium plasticity; Fe-staining; no odor		0.1			
9				0.0	SB-40:9		
10							
11	SP-SM	POORLY-GRADED SAND WITH SILT; reddish gray; wet; soft; medium dense; Fe-staining; no odor					
12				0.0			
13		POORLY-GRADED SAND; dark grey; moist; loose; Fe-staining; coarsening downward; medium density	NM				
14							
15				0.0	SB-40:15		
16	SP						
17				0.0			
18			NM				
19							
20		End of borehole		0.0	SB-40:20		

NOTES: Depth to water 10.0'. NM - Not Measured

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-41

SITE ADDRESS **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/31/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL: DECOMMISSIONING MATERIAL: **Bentonite Clay**
LOGGED BY: **W. Weisberg**	TOTAL DEPTH: **20' bgs** BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Concrete					
1	SP	POORLY-GRADED SAND; brown; loose; dry; trace gravel; no odor	65	0.0			
2							
3							
4							
5				0.0	SB-41:5		
6			80				
7	CL	LEAN CLAY; reddish gray; damp to moist; medium plasticity; Fe-staining; stiff; no odor		0.0			
8							
9	SP-SM	POORLY-GRADED SAND WITH SILT; wet; reddish brown; medium density; no odor					
10				0.0	SB-41:10		
11							
12				0.0			
13	SP	POORLY-GRADED SAND; dark gray; loose; moist; medium density; no odor	NM				
14							
15				0.3	SB-41:15		
16			100				
17							
18							
19							
20		End of borehole		0.4	SB-41:20		

NOTES: Depth to water 9.5'. NM - Not Measured

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-42

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/31/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **W. Weisberg**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP	POORLY-GRADED SAND; reddish brown; loose; no odor					
2	SP-SM	POORLY-GRADED SAND WITH SILT; brown; damp; medium density; Fe-staining; no odor	60	0.0			
3							
4							
5				0.0	SB-42:5		
6	CL	LEAN CLAY; reddish gray; moist; stiff; medium plasticity; no odor	70				
7							
8							
9	SP-SM	POORLY-GRADED SAND WITH SILT; reddish brown; wet; medium density; no odor		0.0	SB-42:9		
10				0.0			
11	SP	POORLY-GRADED SAND; dark gray; moist; loose; medium density; no odor	85				
12				0.0			
13							
14							
15				0.3	SB-42:15		
16			100				
17				0.0			
18							
19							
20		End of borehole		0.0	SB-42:20		

NOTES: Depth to water 9.0'.

ENVIRONMENTAL PARTNERS INC

BORING ID: SB-43

SITE ADDRESS: **961 Commerce Avenue, Longview, WA**	CLIENT: **CCS**
DRILLING CONTRACTOR: **ESN**	PROJECT #: **75104**
DRILLING EQUIPMENT: **Powerprobe 9100**	DATE: **7/31/2018**
DRILLING METHOD: **Direct Push Technology**	GROUND SURFACE ELEV. FT AMSL:
LOGGED BY: **W. Weisberg**	TOTAL DEPTH: **20' bgs**
DECOMMISSIONING MATERIAL: **Bentonite Clay**	BOREHOLE SIZE: **2.25-Inch**

Depth (feet)	USCS	Description (USCS name; Color; Moisture; Density; Plasticity; Dilatency; EPI description; Other)	Interval & % Recovery	PID (ppm)	Sample	Sheen	Notes
0		Asphalt					
1	SP	POORLY-GRADED SAND WITH GRAVEL; dry; brown; loose; no odor					
2	SM	SILTY SAND; reddish brown; dry; medium density; medium plasticity; few clay	80	0.0			
3							
4							
5	SP	POORLY-GRADED SAND; reddish browh; dry; loose; few gravel; no odor		0.0	SB-43:5		
6							
7			80	0.0			
8	SP-SM	POORLY-GRADED SAND WITH SILT; wet below 9'; medium stiff; low plasticity; no odor					
9							
10				0.0	SB-43:10		
11				0.0			
12				0.0			
13			100	0.0			
14		POORLY-GRADED SAND; blackish gray; moist; loose; medium density; no odor		0.0			
15				0.0	SB-43:15		
16				0.0			
17	SP			0.0			
18			100	0.0			
19				0.0			
20		End of borehole		0.0	SB-43:20		

NOTES: Depth to water 9.5'.

APPENDIX C

Blue Sage Environmental, Inc.
Boring Logs

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

bse-1.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			0-1' Imported rock, gray, dry, dense, 2-4"		GW		
			1'-5' Silt, brown, damp, medium, very fine	100	ML		Temporary Boring, Backfilled
			5'-10' Well graded silty sand, black, damp, medium, medium/fine	100	SM		
		B1-10	10'-15' Poorly graded sand, black, wet, loose, fine	100	SP		
		B1-15	EOB at 15'				

0 5 10 15 20 25 30

Depth in feet

Drilling Method: Direct Push	Date: 08/17/18	Other Information:
Drilling Company: ESN Northwest	Weather: Clear skies, 72 degrees F	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Bud Clary Subaru
961 Commerce Avenue
Longview, WA

BSE-1

bse-2.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			0-1' Imported rock, gray, dry, dense, 2-4"		GW		
			1'-4' Sand and medium gravel, brown, damp, medium, medium/fine	100	SM		Temporary Boring, Backfilled
			4'-9.5' Silt, black, damp, medium, very fine	100	ML		
		B2-10	9.5'-15' Poorly graded sand, black, wet, loose, fine	100	SP		
		B2-15	EOB at 15'				

0 5 10 15 20 25 30

Depth in feet

Drilling Method: Direct Push	Date: 08/17/18	Other Information:
Drilling Company: ESN Northwest	Weather: Clear skies, 72 degrees F	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Bud Clary Subaru
961 Commerce Avenue
Longview, WA

BSE-2

bse-3.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			Surface: Asphalt				
			0-2' Sand and medium gravel, gray, dry, medium, medium/fine				Temporary Boring, Backfilled
			2'-5' Poorly graded silty sand, black, damp, medium, fine	100	SM		
			5'-8' Silt, brown, moist, medium, very fine		ML		
			8'-10' Poorly graded sand, black, wet, loose, fine	100	SP		
		B3-10	10-15' Well graded silty sand, brown, wet, medium, medium/fine	100	SM		
		B3-15	EOB at 15'				

0 5 10 15 20 25 30

Depth in feet

Drilling Method:	Direct Push	Date: 08/17/18	Other Information:
Drilling Company:	ESN Northwest	Weather: Clear skies, 72 degrees F	
Boring Diameter:	Two inches	Page 1 of 1	
Logged By:	Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Bud Clary Subaru
961 Commerce Avenue
Longview, WA

BSE-3

bse-4.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			Surface: Asphalt				
			0-1' Well graded sand w/ med gravel, gray, damp, medium, med/fine 1'-6' Poorly graded silty sand, brown, damp, medium, fine	100	SM		Temporary Boring, Backfilled
			6'-10' Well graded silty sand, black, moist, medium, medium/fine	100	SM		
		B4-10	10-15' Well graded sand, black, loose, medium, medium/fine	100	SW		
		B4-15	EOB at 15'				

0 5 10 15 20 25 30

Depth in feet

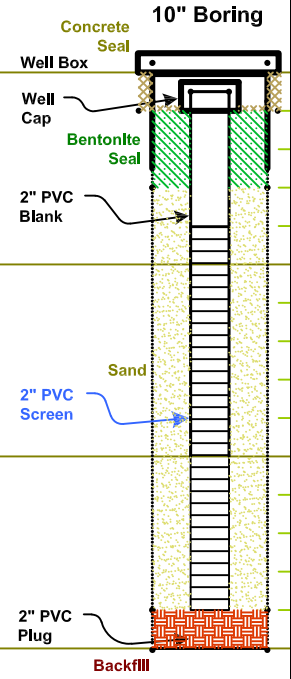
Drilling Method: Direct Push	Date: 08/17/18	Other Information:
Drilling Company: ESN Northwest	Weather: Clear skies, 72 degrees F	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Bud Clary Subaru
961 Commerce Avenue
Longview, WA

BSE-4

Depth	BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)
				Asphalt Surface			
0				Crushed Rock (imported cover), gray, dry,	60	GW	
				medium, no odor		SM/GM	
				Sand & Gravel Mix: brown, damp, medium, no		SM	
				odor			
				Silty Sand: brown, damp, medium, no odor			
5				Silty Sand: brown, moist, medium, no odor	100	SM	
				Silty Sand: gray, wet, medium, no odor		SM	
10				Sand: brown, moist, loose, no odor	100	SW	
				Sand: gray, damp, loose, no odor		SW	
15				EOB at 15'			
20							
25							
30	Depth in feet						



Drilling Method: Direct Push	Date: 4/29/19	Other Information: BHU-745
Drilling Company: ESN Northwest	Weather: Overcast and warm	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

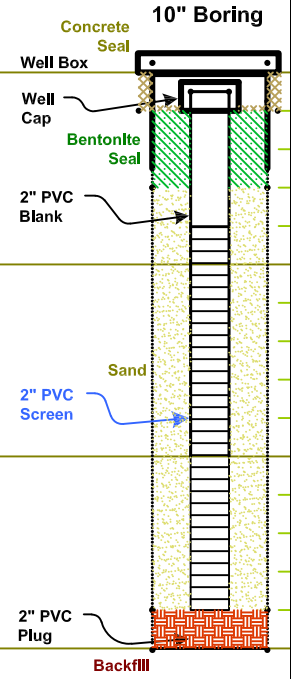
Boring/Well Log
Bud Clary Subaru

961 Commerce Avenue
Longview, Washington

B-6/MW-1

Depth	BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
				Asphalt Surface				
0				Crushed Rock (imported cover), gray, dry,	40	GW		
				medium, no odor				
				Sand & Gravel Mix: brown, damp, medium, no		SM/GM		
				odor				
				Silty Sand: brown, damp, medium, no odor		SM		
5				Silty Sand: brown, damp, medium, no odor	25	SM		
				Gravel-Sand-Silt Mix: Gray, wet, medium, no odor		GM		
10				Silty Sand: gray, wet, medium, oil odor	50	SM		
				Sand: brown, wet, medium, no odor		SW		
15				EOB at 15'				
20								
25								
30								

Depth in feet



Drilling Method: Direct Push	Date: 4/29/19	Other Information: BHU-746
Drilling Company: ESN Northwest	Weather: Overcast and warm	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

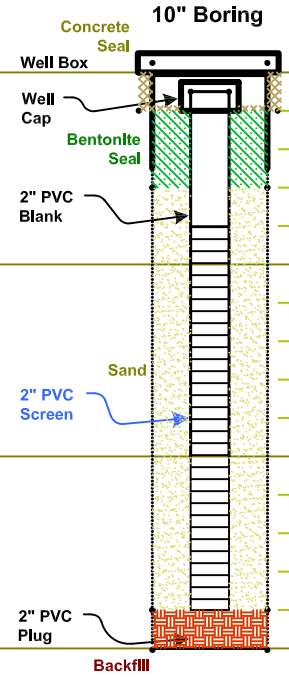
BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Bud Clary Subaru

961 Commerce Avenue
Longview, Washington

B-7/MW-2

Depth	BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
				Pavers Surface				
0				Sand & Gravel Mix: brown, damp, medium, no odor	100	SM/GM		
				Rock (imported fill): gray, damp, dense, no odor		GW		
5				Rock (imported fill): gray, damp, dense, no odor	100	GW		
10				Sand: black, wet, loose, oil odor @ 11'	100	SW		
15				EOB at 15'				
20								
25								
30	Depth in feet							



Drilling Method: Direct Push	Date: 4/29/19	Other Information: BHU-747
Drilling Company: ESN Northwest	Weather: Overcast and warm	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

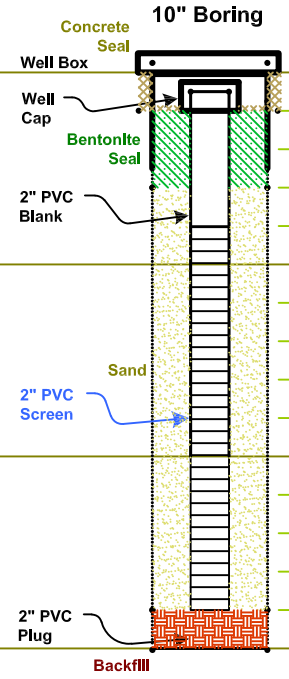
BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Bud Clary Subaru

961 Commerce Avenue
Longview, Washington

B-8/MW-3

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			Large Rock (imported cover)				
0			Sand & Gravel Mix: gray, damp, medium, no odor	50	SM/GM		
			Silty Sand: brown, damp, medium, no odor		SM		
5			Silty Sand: brown, damp, medium, no odor	100	SM		
			Silty Sand: brown, moist, medium, no odor		SM		
10			Silty Sand: gray, wet, medium, no odor	100	SM		
			Sand: black, wet, medium, no odor		SW		
15			EOB at 15'				
20							
25							
30	Depth in feet						



Drilling Method: Direct Push	Date: 4/29/19	Other Information: BHU-748
Drilling Company: ESN Northwest	Weather: Overcast and warm	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

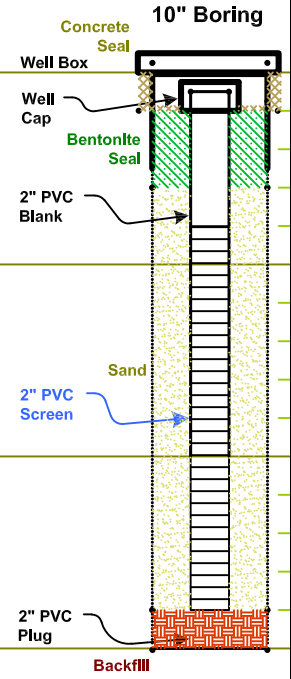
Boring/Well Log
Bud Clary Subaru

961 Commerce Avenue
Longview, Washington

B-9/MW-4

Depth	BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)
				Pavers Surface			
0				Sand & Gravel Mix: gray, damp, medium, no odor	100	SM/GM	
				Sand: gray, damp, medium, no odor		SW	
				Silty Sand: brown, damp, medium, no odor		SM	
5				Silty Sand: brown, moist, medium, no odor	100	SM	
				Silty Sand: gray, moist, medium, no odor		SM	
10				Silty Sand: gray, wet, medium, no odor	100	SM	
				Sand: black, wet, medium, no odor		SW	
15				EOB at 15'			
20							
25							
30	Depth in feet						

WELL CONSTRUCTION



Drilling Method: Direct Push	Date: 4/29/19	Other Information: BHU-749
Drilling Company: ESN Northwest	Weather: Overcast and warm	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Alex Koch		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring/Well Log
Bud Clary Subaru

961 Commerce Avenue
Longview, Washington

B-10/MW-5

bse-11.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			0-10": FILL, gravelly fine to medium grained sand, dry to wet at 8', gray brown, no odor.	50	Fill	0.0	Temporary Boring. Backfilled with Bentonite
				60	Fill	0.0	
		B-11-13	10-13': SILT with trace fine grained sand, dark gray, wet, medium dense, strong petroleum odor.	100	SM	25.9	
			13-15': SAND, medium grained with trace silt, gray, wet, medium dense, moderate petroleum odor.		SP		
		B-11-17	15-20': SAND, medium grained with trace gravel and silt, brown, wet, medium dense, no odor.	100	SP	0.0	
			EOB at 20'				

0 5 10 15 20 25 30

Depth in feet

Drilling Method: Direct Push	Date: 4/15/2021	Other Information:
Drilling Company: ESN Northwest	Weather: Sunny, mid 60s	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Haley Carter		

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring Log
Bud Clary Subaru
961 Commerce Avenue
Longview, WA

B-11

bse-12.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			0-10": FILL, gravelly fine to medium grained sand, dry to wet at 8', brown, no odor.	45	Fill	0.0	Temporary Boring, Backfilled to 5.5 feet with sand. 0 – 5.5 ft completed as Soil Gas Monitoring Well SV-2
				80	Fill	0.0	
		B-12-13	10-13': SILT with trace fine grained sand, dark gray, wet, medium dense, strong petroleum odor.	100	SM	25.4	
			13-15': SAND, medium grained with trace silt, dark brown, wet, medium dense, moderate petroleum odor.		SP		
		B-12-17	15-20': SAND, medium to coarse grained with trace gravel and silt, brown, wet, medium dense, no odor.	100	SP	0.0	
			EOB at 20'				

0 5 10 15 20 25 30

Depth in feet

Drilling Method: Direct Push	Date: 4/15/2021	Other Information:
Drilling Company: ESN Northwest	Weather: Sunny, mid 60s	
Boring Diameter: Two inches	Page 1 of 1	
Logged By: Haley Carter		

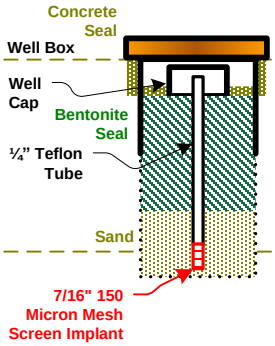
BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring Log
Bud Clary Subaru
961 Commerce Avenue
Longview, WA

B-12

soil vapor wells.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			0-5' - FILL, Gravel-sand-silt mixture, imported		Fill		



0 5 10 15 20 25 30

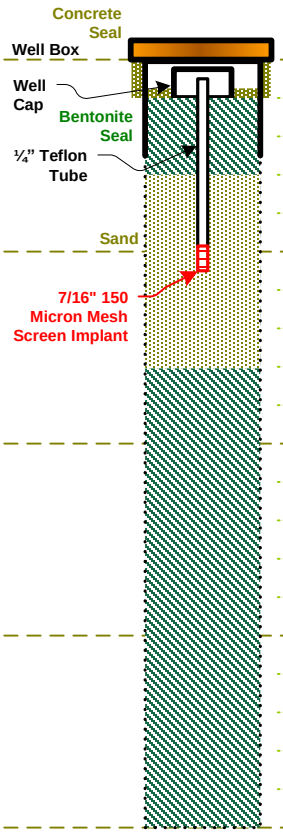
Depth in feet

Drilling Method:	Direct Push	**Date:**	**Other Information:**
Drilling Company:	ESN Northwest	**Weather:**	
Boring Diameter:	Two inches	**Page** 1 **of** 1	
Logged By:	Haley Carter		

BLUE SAGE ENVIRONMENTAL INC KENNEWICK, WA	***Soil Vapor Well Bud Clary Subaru 961 Commerce Avenue Longview, WA***	SV-1

bse-12 sv-2.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			0-10": FILL, gravelly fine to medium grained sand, dry to wet at 8', brown, no odor.	45	Fill	0.0	
				80	Fill	0.0	
		B-12-13	10-13': SILT with trace fine grained sand, dark gray, wet, medium dense, strong petroleum odor.	100	SM	25.4	
			13-15': SAND, medium grained with trace silt, dark brown, wet, medium dense, moderate petroleum odor.		SP		
		B-12-17	15-20': SAND, medium to coarse grained with trace gravel and silt, brown, wet, medium dense, no odor.	100	SP	0.0	
			EOB at 20'				



0 5 10 15 20 25 30

Depth in feet

Drilling Method:	Direct Push	**Date:**	4/15/2021
Drilling Company:	ESN Northwest	**Weather:**	Sunny, mid 60s
Boring Diameter:	Two inches	**Page**	1 of 1
Logged By:	Haley Carter		

Other Information:

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

Boring Log
Bud Clary Subaru
961 Commerce Avenue
Longview, WA

B-12/SV-2

APPENDIX D

Blue Sage Environmental, Inc.
Groundwater Contours

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

COMMERCE AVE

N

0 20
10
(FEET)

SIDEWALK

Excavated Area

MW-1 (8.01)

MW-2 (8.05)

MW-3 (8.04)

MW-4 (8.01)

MW-5 (7.96)

NEW DEALERSHIP BUILDING

8.04

8.02

8.00

7.98

FIR ST

SIDEWALK

Alleyway

LEGEND

General Direction of Groundwater Flow	Monitoring Well Location and Identification Number (By BSE 5/14/2019)
8.00 Groundwater Elevation Contour Line Feet Above Arbitrary Datum	Sanitary Sewer Line
(7.96) Groundwater Elevation at Well	Water Line
	Underground Power Line
	Power Pole
	Catch Basin
	Manhole
	Property Line
	Stormwater Line
	Natural Gas Line

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

GROUNDWATER ELEVATION CONTOUR MAP, JUNE 27, 2019
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Date: 02/04/20

Figure
WC-1

COMMERCE AVE

N

0 20
10
(FEET)

SIDEWALK

GAS

UE

SW

Excavated Area

MW-1 (7.30)

MW-2 (7.30)

MW-3 (7.30)

MW-4 (7.30)

MW-5 (7.28)

7.30

7.29

NEW DEALERSHIP BUILDING

FIR ST

Alleyway

W

SS

PP

mh

PL

LEGEND

General Direction of Groundwater Flow	
8.00	Groundwater Elevation Contour Line Feet Above Arbitrary Datum
(7.96)	Groundwater Elevation at Well
MW-1	Monitoring Well Location and Identification Number (By BSE 5/14/2019)
SS	Sanitary Sewer Line
W	Water Line
UE	Underground Power Line
PP	Power Pole
	Catch Basin
mh	Manhole
PL	Property Line
SW	Stormwater Line
GAS	Natural Gas Line

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

GROUNDWATER ELEVATION CONTOUR MAP, SEPTEMBER 6, 2019
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Date: 02/04/20

Figure
WC-2

COMMERCE AVE

N

0 20
10
(FEET)

SIDEWALK

GAS

UE

SW

Excavated Area

MW-1 (7.59)

MW-2 (7.60)

MW-3 (7.56)

MW-4 (7.57)

MW-5 (7.53)

7.60

7.55

NEW DEALERSHIP BUILDING

FIR ST

Alleyway

W

SS

pp

mh

PL

LEGEND

General Direction of Groundwater Flow	
8.00	Groundwater Elevation Contour Line Feet Above Arbitrary Datum
(7.96)	Groundwater Elevation at Well
MW-1	Monitoring Well Location and Identification Number (By BSE 5/14/2019)
SS	Sanitary Sewer Line
W	Water Line
UE	Underground Power Line
pp	Power Pole
	Catch Basin
mh	Manhole
PL	Property Line
SW	Stormwater Line
GAS	Natural Gas Line

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

GROUNDWATER ELEVATION CONTOUR MAP, DECEMBER 2, 2019
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Date: 02/04/20

Figure
WC-3

COMMERCE AVE

N

0 20
10
(FEET)

SIDEWALK

GAS

UE

SW

Excavated Area

MW-1 (7.76)

MW-2 (7.83)

MW-3 (7.80)

MW-4 (7.74)

MW-5 (7.74)

NEW DEALERSHIP BUILDING

7.80

7.75

FIR ST

Alley

W

SS

PP

mh

PL

LEGEND

General Direction of Groundwater Flow	Monitoring Well Location and Identification Number (By BSE 5/14/2019)
8.00 – Groundwater Elevation Contour Line Feet Above Arbitrary Datum	Sanitary Sewer Line
(7.96) Groundwater Elevation at Well	Water Line
	Underground Power Line
	Power Pole
	Catch Basin
	Manhole
	Property Line
	Stormwater Line
	Natural Gas Line

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

GROUNDWATER ELEVATION CONTOUR MAP, SEPT. 25, 2020
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Date: 02/01/21

Figure
WC-4

COMMERCE AVE

0 20
10
(FEET)

SIDEWALK

Excavated Area

MW-1 (8.98)

8.95

8.90

MW-2 (8.87)

NEW DEALERSHIP BUILDING

SIDEWALK

FIR ST

MW-3 (8.87)

MW-4 (8.92)

MW-5 (8.87)

Alley

LEGEND

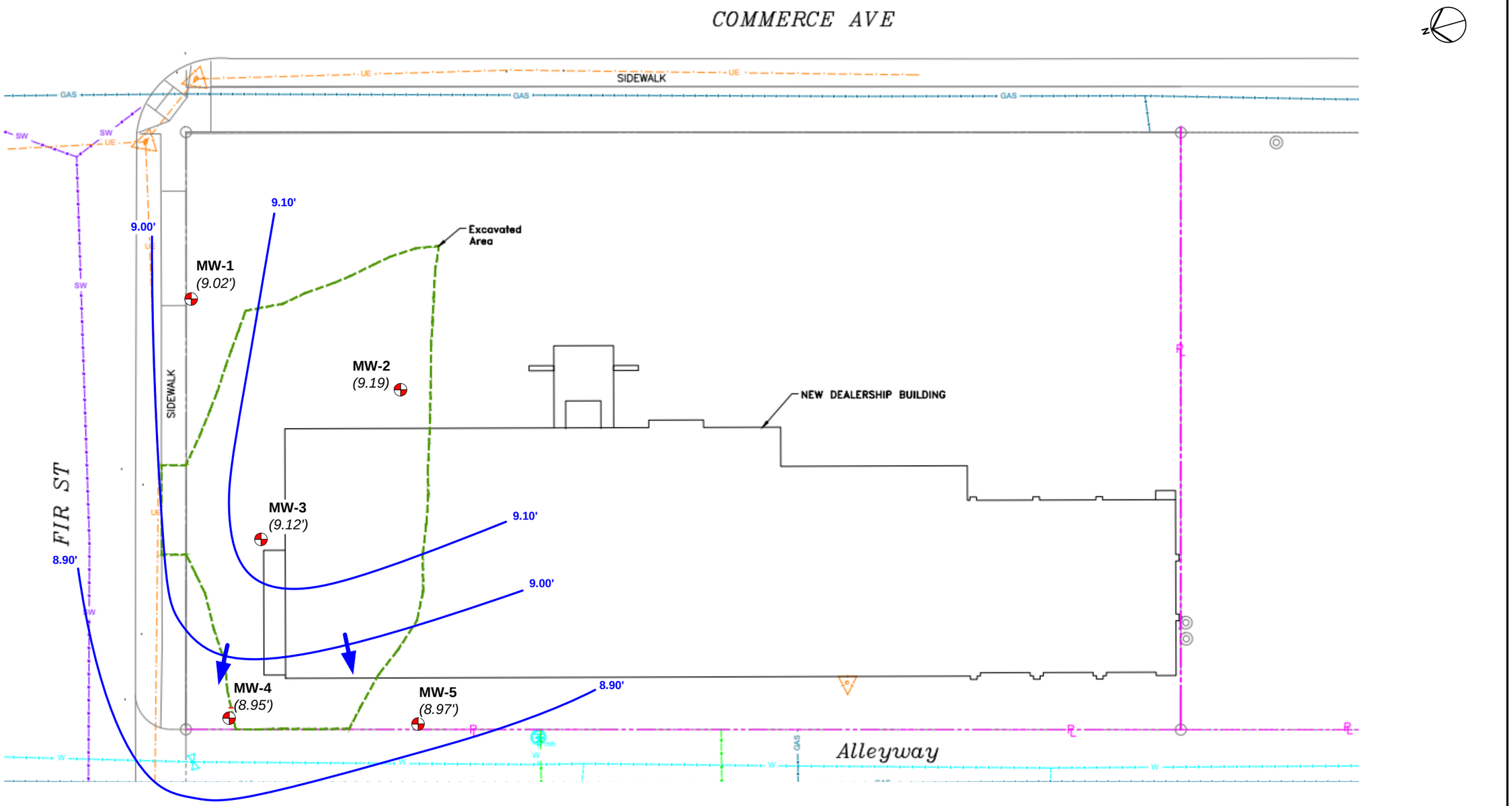
General Direction of Groundwater Flow	Monitoring Well Location and Identification Number (By BSE 5/14/2019)
8.00 Groundwater Elevation Contour Line Feet Above Arbitrary Datum	Sanitary Sewer Line
(7.96) Groundwater Elevation at Well	Water Line
	Underground Power Line
	Power Pole
	Catch Basin
	Manhole
	Property Line
	Stormwater Line
	Natural Gas Line

BLUE SAGE ENVIRONMENTAL INC
KENNEWICK, WA

GROUNDWATER ELEVATION CONTOUR MAP, DEC. 19, 2020
Bud Clary Subaru
961 Commerce Avenue
Longview, Washington

Date: 02/01/21

Figure
WC-5



Contour Legend

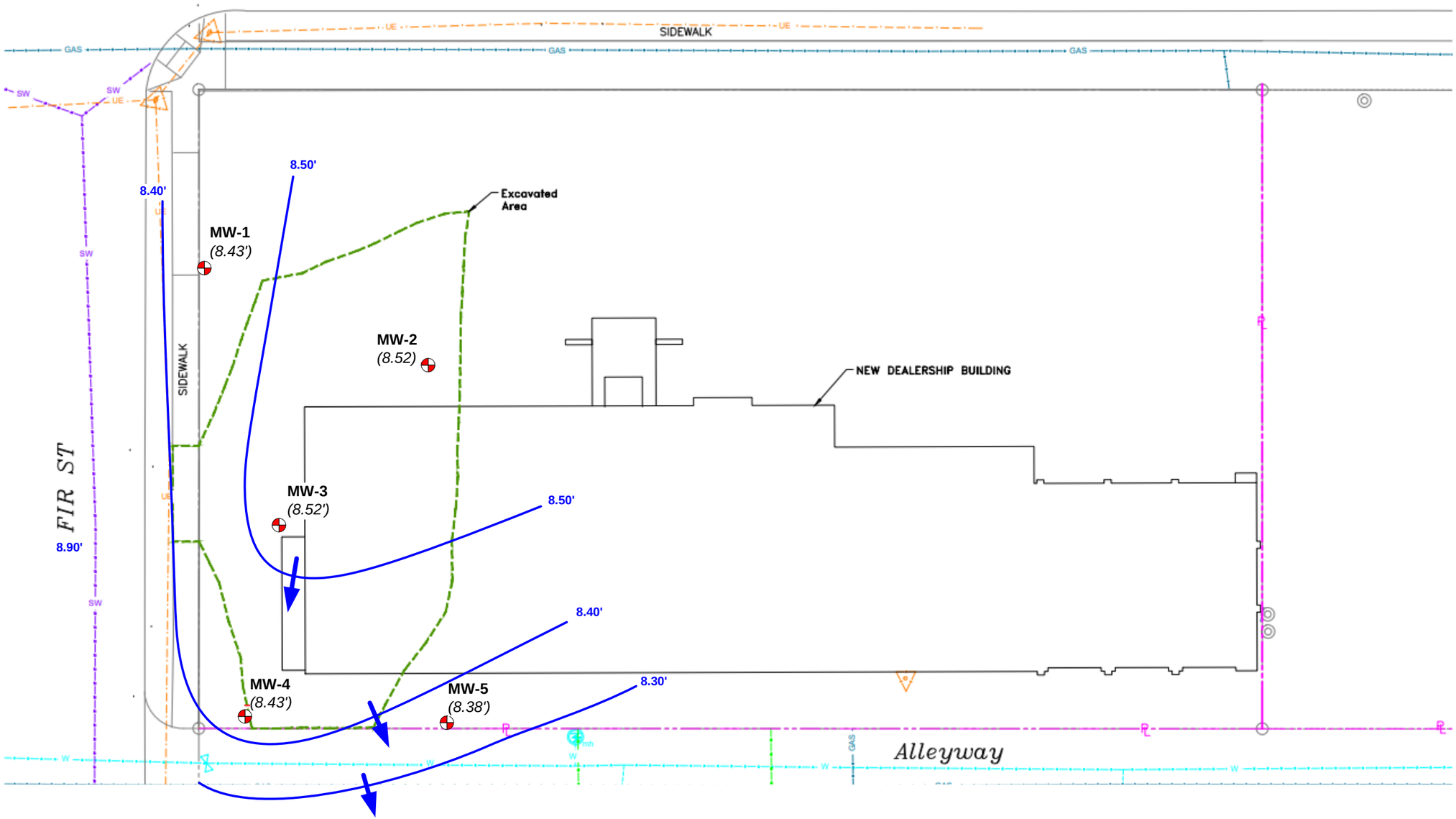
- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- (8.95') Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, MARCH 17, 2021** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 4/29/2021	Figure WC-6



Contour Legend

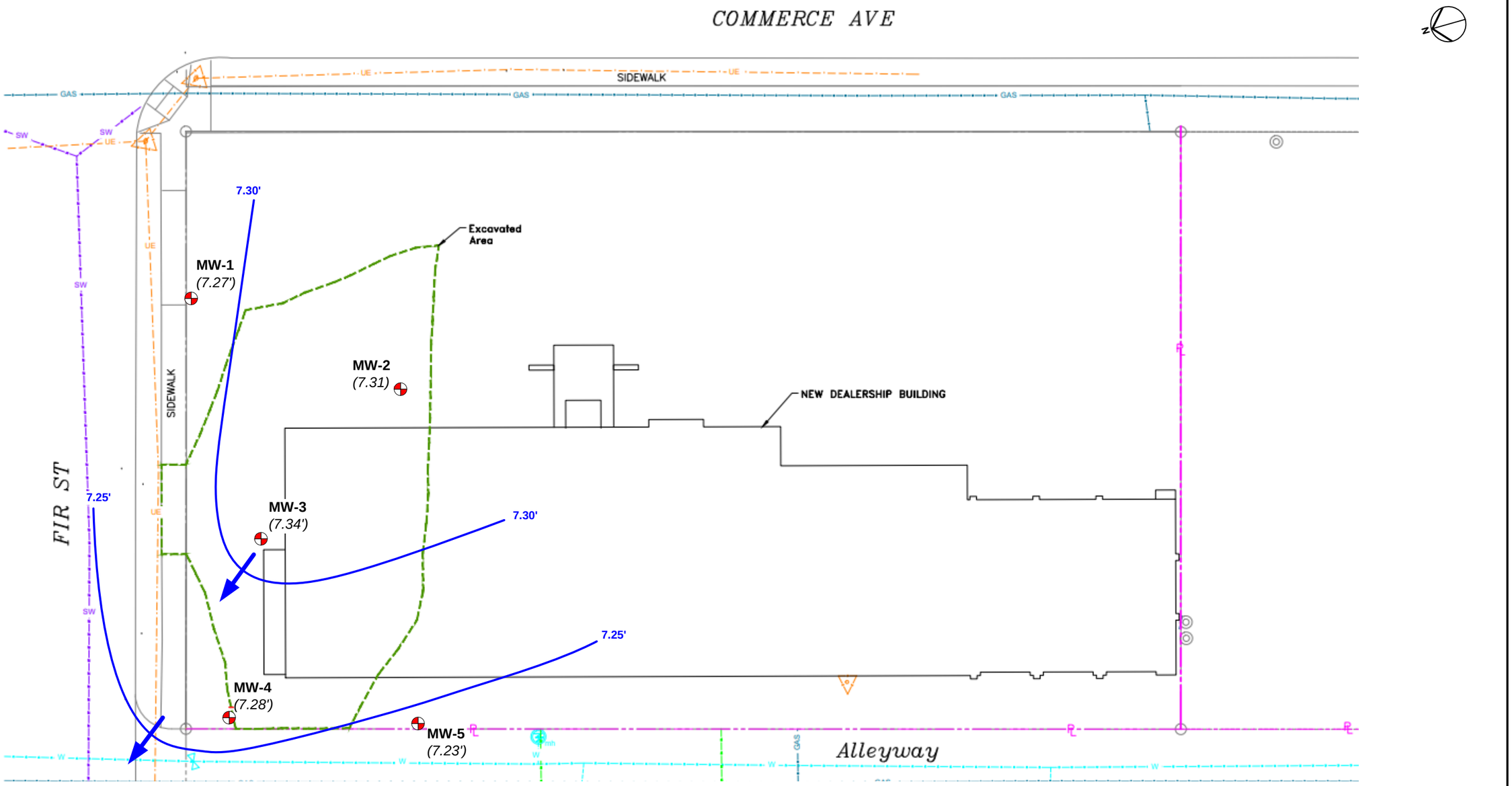
- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- (8.95') Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, JUNE 17, 2021** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 6/19/2021	Figure WC-7



Contour Legend

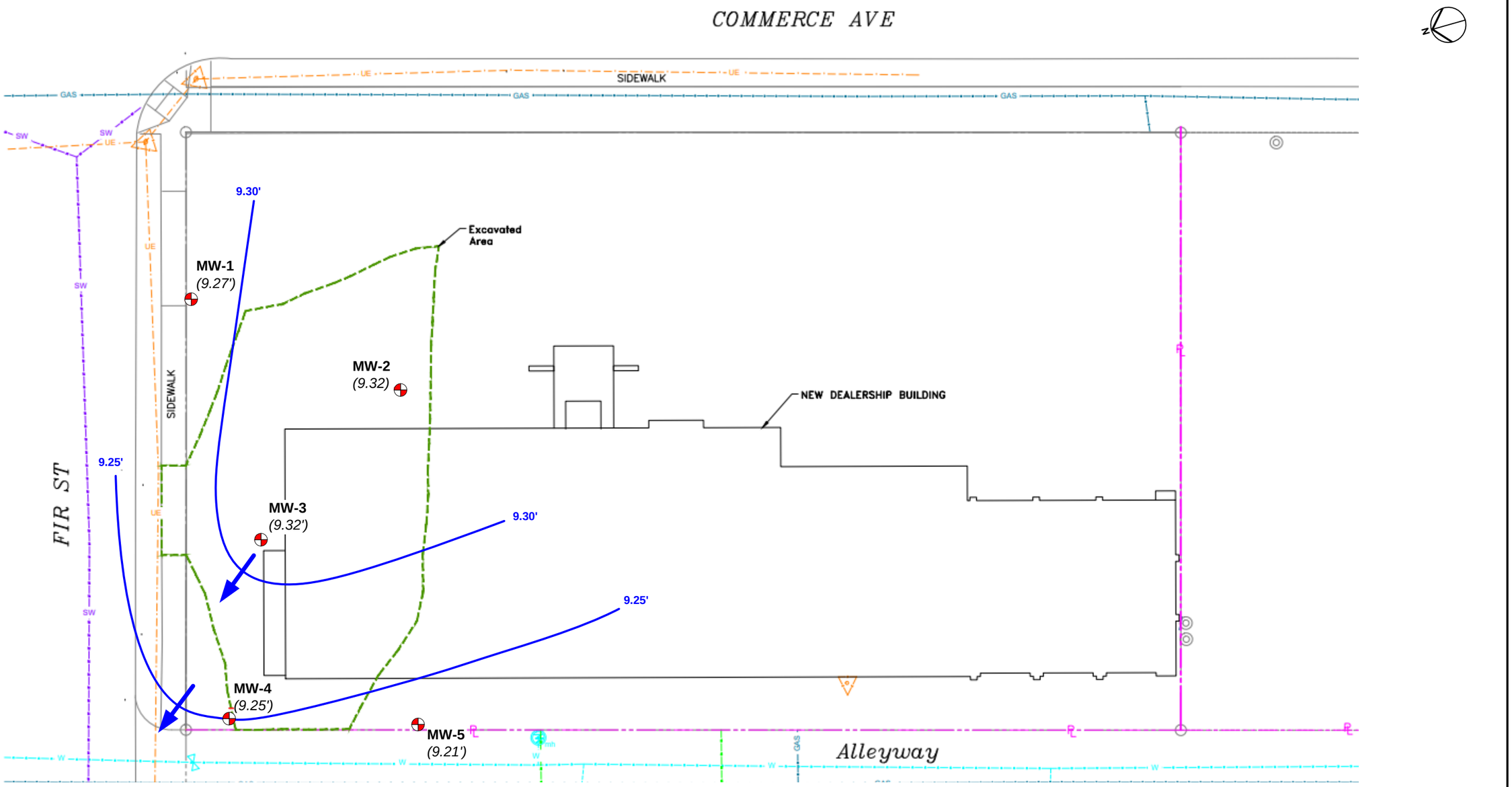
- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- (8.95') Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, SEPTMEBER 21, 2021** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 9/24/2021	Figure WC-8



Contour Legend

- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- (8.95') Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, DECEMBER 8, 2021** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 9/24/2021	Figure WC-9

COMMERCE AVE

SIDEWALK

GAS

UE

SW

FIR ST

SIDEWALK

Excavated Area

MW-1
(8.78')

MW-2
(8.85')

MW-3
(8.83')

MW-4
(8.75')

MW-5
(8.69')

8.80'

8.85'

8.80'

8.75'

8.75'

8.70'

8.70'

NEW DEALERSHIP BUILDING

Alleyway

Contour Legend

Interpreted Groundwater Flow Direction

Interpreted Groundwater Contour Line

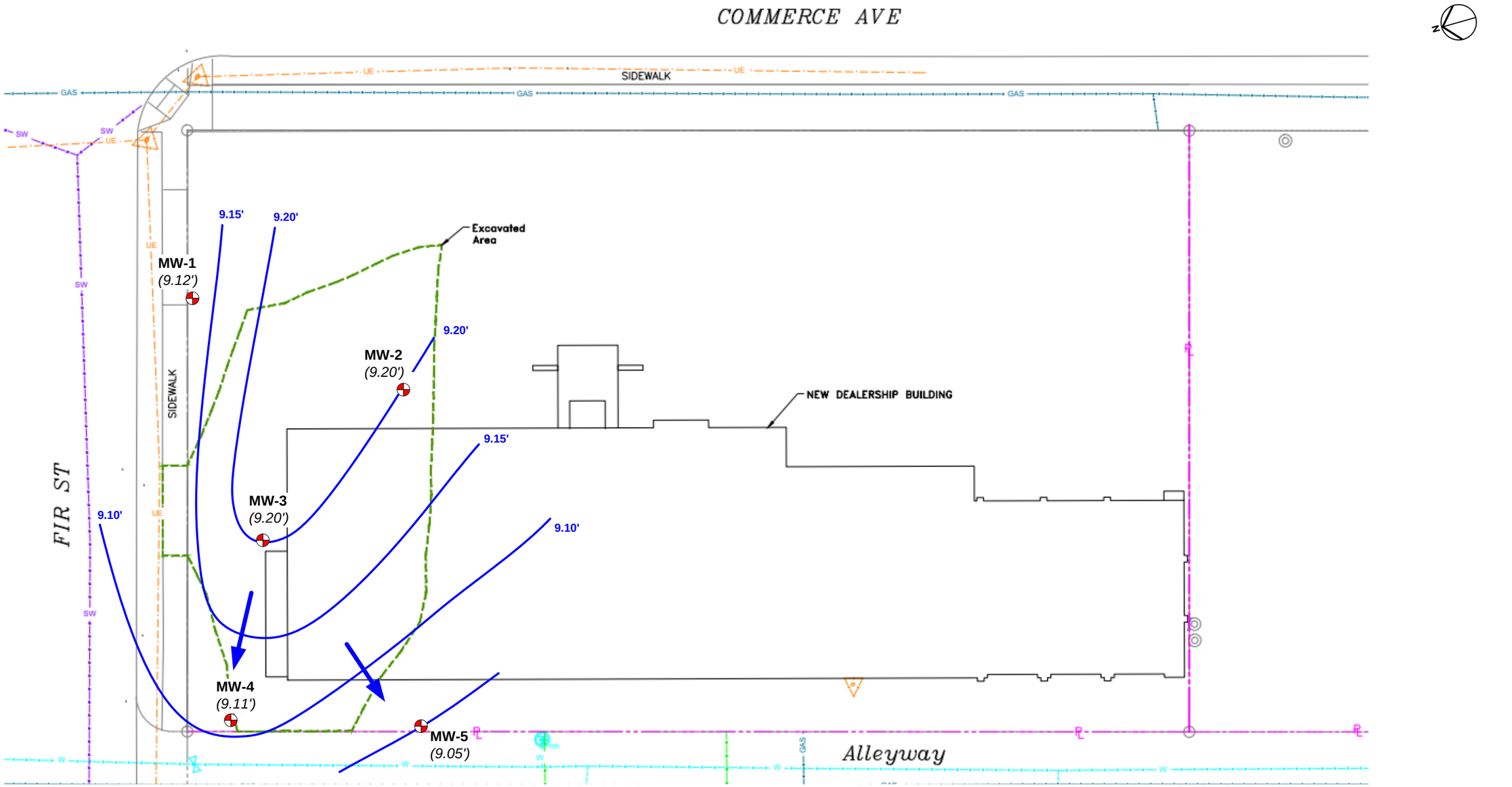
(8.95') Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, MARCH 31, 2022** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 4/8/2022	Figure WC-10



Contour Legend

- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- *(8.95')* Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, June 1, 2022** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 4/8/2022	Figure WC-11

COMMERCE AVE

SIDEWALK

GAS

SW

UE

Excavated Area

7.30'

7.35'

MW-1
(7.28')

MW-2
(7.30')

MW-3
(7.37')

MW-4
(7.32')

MW-5
(7.26')

NEW DEALERSHIP BUILDING

FIR ST

Alleyway

Contour Legend

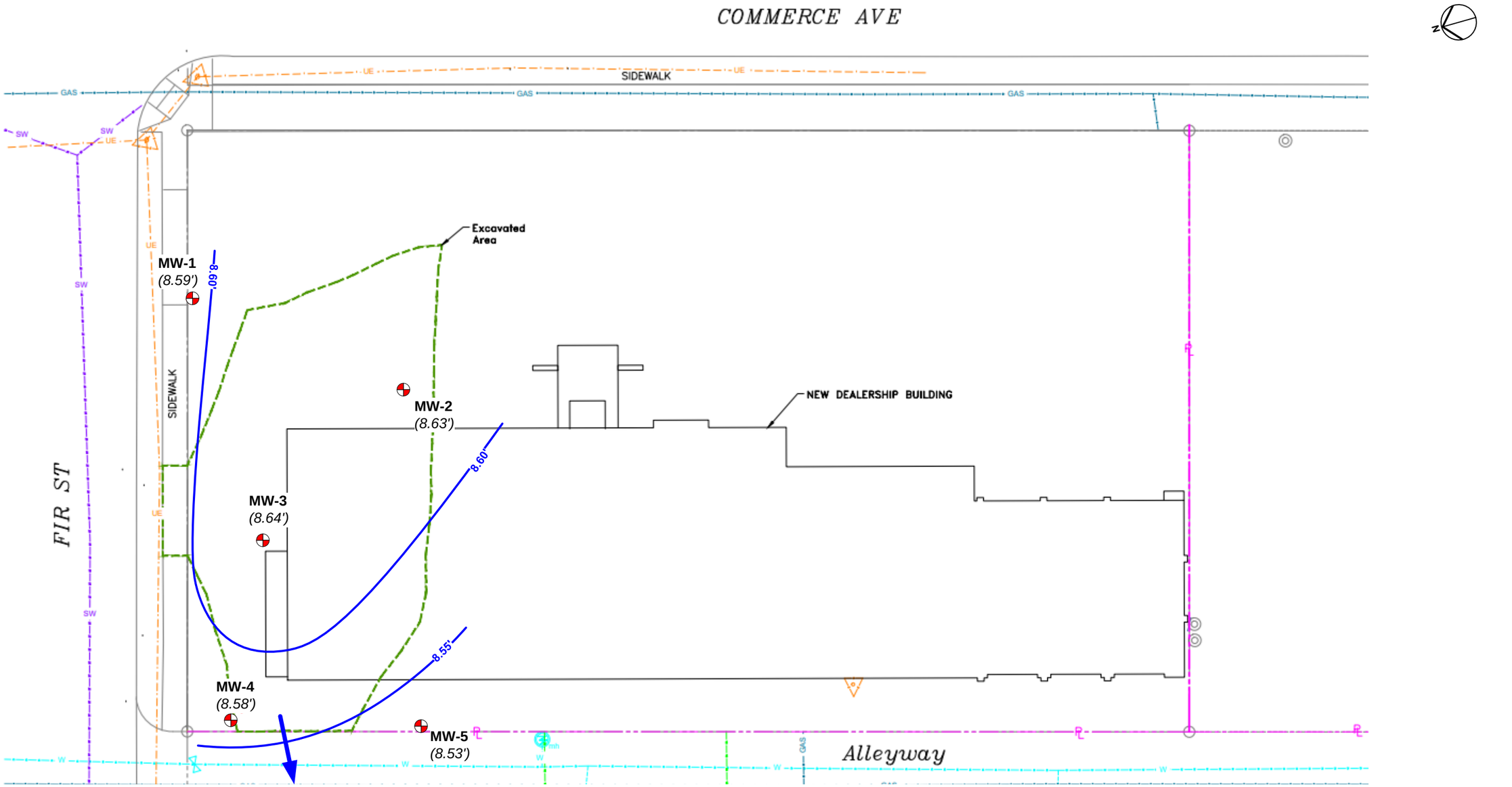
- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- (8.95') Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, September 28, 2022** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 9/29/2022	Figure WC-12



Contour Legend

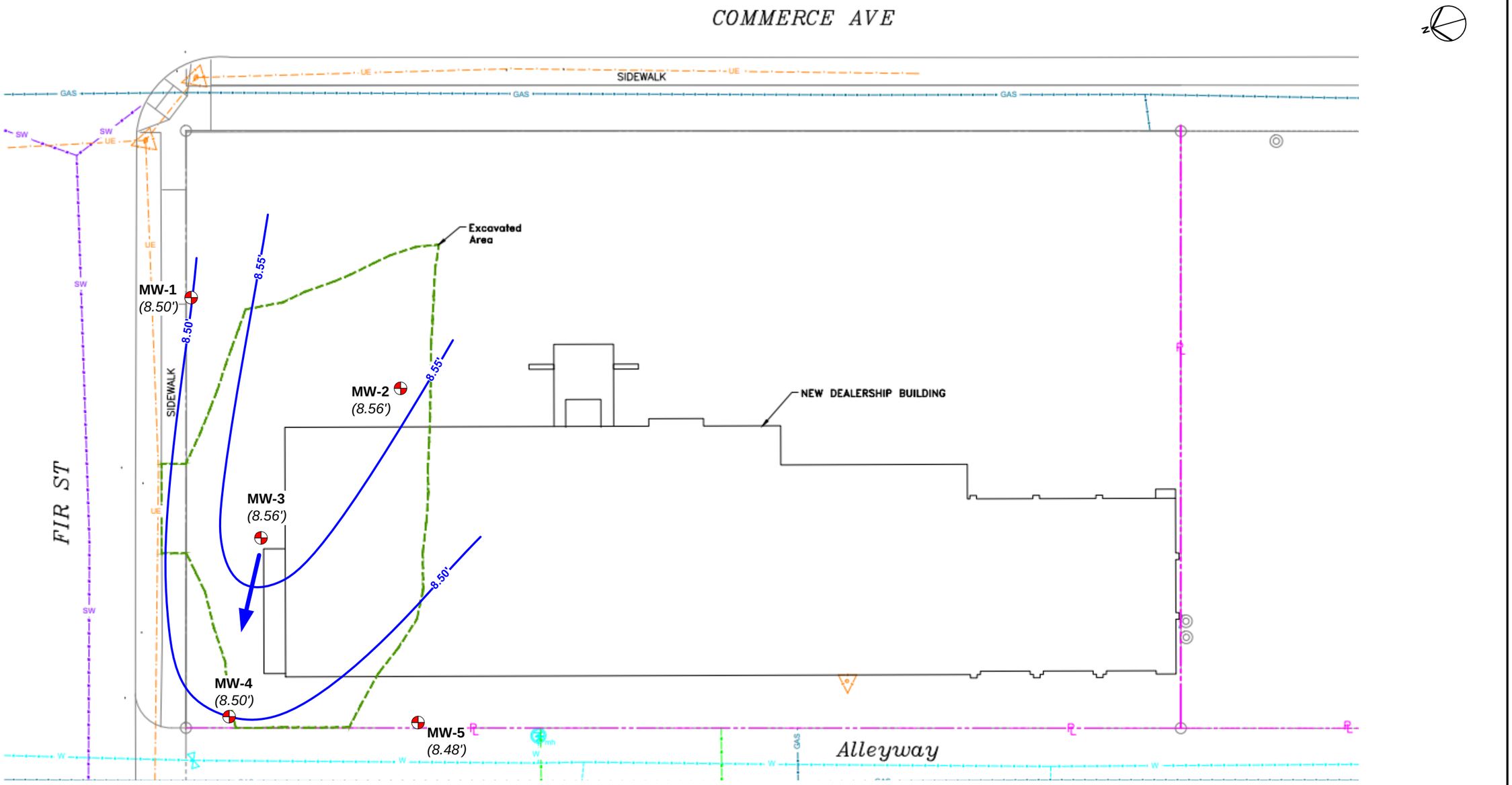
- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- *(8.95')* Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, December 12, 2022** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 5/23/2023	Figure WC-13



Contour Legend

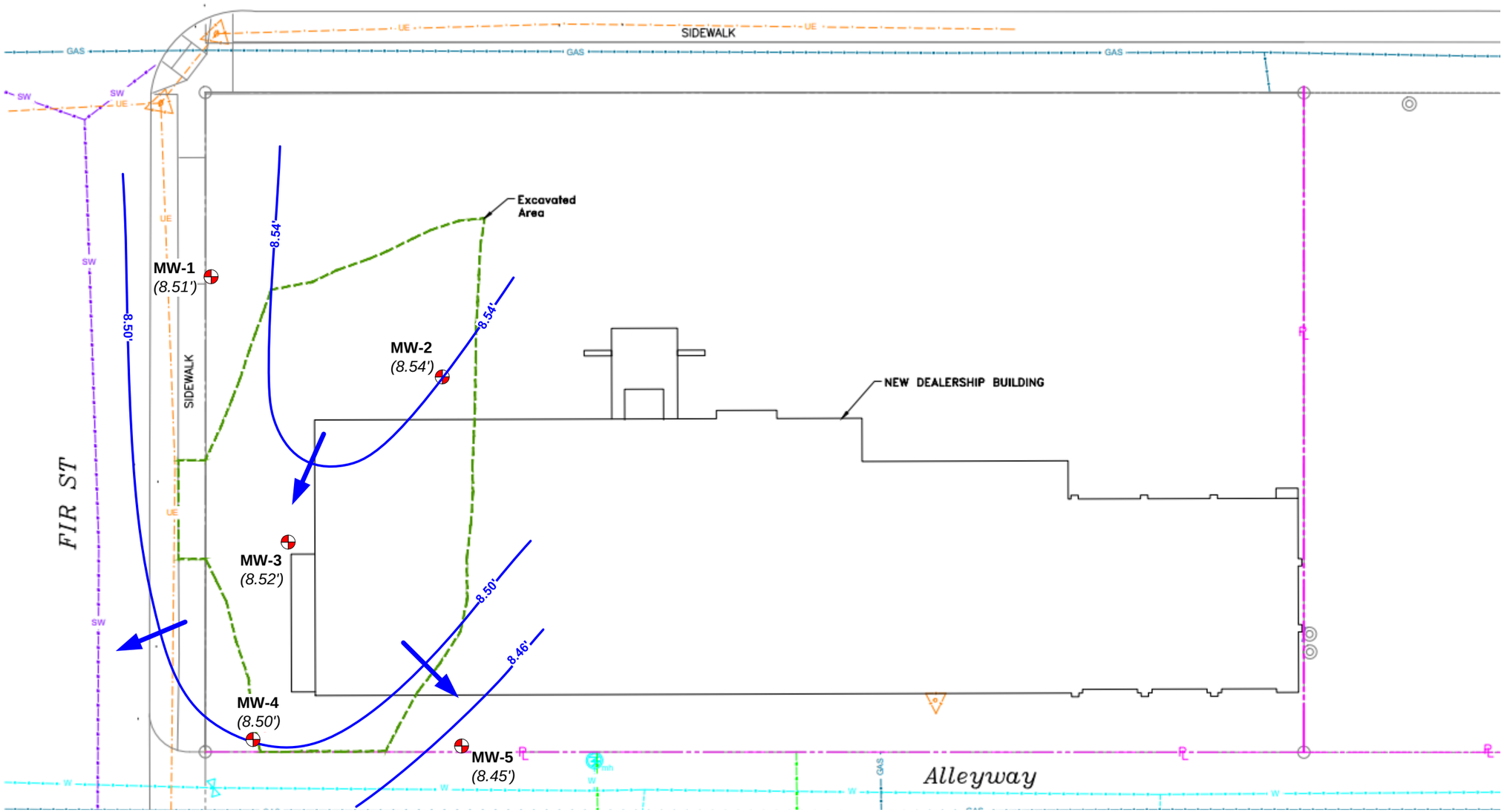
- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- *(8.95')* Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, March 20, 2023** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 5/23/2023	Figure WC-14



Contour Legend

- Interpreted Groundwater Flow Direction
- Interpreted Groundwater Contour Line
- (8.95') Approximate Groundwater Elevation

Figure and notations are in color. Black and white copies may not be suitable for use.

Scale: 1" = 20'

0 ft. 12 ft. 20 ft. 40 ft.

Blue Sage Environmental INC Kennewick, WA	**GROUNDWATER ELEVATION CONTOUR MAP, June 22, 2023** **Bud Clary Subaru** **961 Commerce Avenue** **Longview, Washington**	Date: 7/10/2023	Figure WC-15

APPENDIX E

Soil Analytical Laboratory Reports

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

ESN NORTHWEST | Environmental Services Network

August 31, 2018

Alex Koch
Blue Sage Environmental
198007 E 30th Ave
Kennewick, WA 99337

Dear Mr. Koch:

Please find enclosed the analytical data reports for the Bud Clary Subaru Project in Longview, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, and BTEX by Method 8260 on August 23, 2018.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. A copy of the invoice for this work is enclosed for your records.

ESN Northwest appreciates the opportunity to have provided these services to Blue Sage Environmental for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A Korosec

Michael A. Korosec
President

1210 Eastside Street SE, Suite 200 ■ Olympia, Washington 98501 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.esnnw.com* E-Mail: *info@esnnw.com*

ESN NORTHWEST CHEMISTRY LABORATORY

Bud Clary Auto Group
PROJECT BUD CLARY SUBARU
Longview, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil by Method NWTPH-Dx/Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank	8/23/2018	8/23/2018	121	nd	nd
LCS	8/23/2018	8/23/2018	110	85%	---
EX CTR WEST	8/23/2018	8/23/2018	105	480	**74,000**
EX NE FLOOR	8/23/2018	8/23/2018	114	nd	**8300**
EX SE FLOOR	8/23/2018	8/23/2018	94	**60**	**66,000**
EX EAST FLOOR	8/23/2018	8/23/2018	86	**540**	**81,000**
EX EAST SIDEWALL	8/23/2018	8/23/2018	102	nd	nd
Reporting Limits				50	100

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Bud Clary Auto Group
PROJECT BUD CLARY SUBARU
Longview, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260

Sample Number	Date Prepared	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline Range Organics (mg/kg)	Surrogate Recovery (%)
Method Blank	8/23/2018	8/23/2018	nd	nd	nd	nd	nd	100
LCS	8/23/2018	8/23/2018	85%	90%	112%	111%	111%	97
LCSD	8/23/2018	8/23/2018	81%	83%	108%	107%	---	98
EX EAST SIDEWALL	8/22/2018	8/23/2018	nd	nd	nd	nd	nd	107
Reporting Limits			0.02	0.05	0.05	0.15	10	

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS : 65% TO 135%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: BUD CLARY AUTO GROUP (BSE) | DATE: 8/22/18 | PAGE _____ OF _____

ADDRESS: LONGVIEW, WA | PROJECT NAME: BUD CLARY SUBARU

PHONE: _____ FAX: _____ | LOCATION: LONGVIEW

CLIENT PROJECT #: _____ | PROJECT MANAGER: AKOCH | COLLECTOR: AHK | DATE OF COLLECTION: _____

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. EX CTR WEST	12	0830	Soil	4oz	X																	8/17/18	1	
2. EX NE FLOOR	12	0810	"	"	X																	8/21/18	1	
3. EX SE FLOOR	12	0820	"	"	X																	"	1	
4. EX EAST FLOOR	12	1230	"	"	X																	"	1	
5. EX EAST SIDEWALL	10	1235	"	40z/VOA	X	X	X															"	3	
6.																								
7.																								
8.																								
9.																								
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	8/22/18	[signature]	8-22-18
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432
Website: www.esnnw.com
E-Mail: info@esnnw.com

ESN NORTHWEST
Environmental
Services Network

September 14, 2018

Alex Koch
Blue Sage Environmental
198007 E 30th Ave
Kennewick, WA 99337

Dear Mr. Koch:

Please find enclosed the analytical data reports for the Bud Clary Subaru Project in Longview, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, BTEX by Method 8260, and Pb by Method 6020 on August 30 – September 12, 2018.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. A copy of the invoice for this work is enclosed for your records.

ESN Northwest appreciates the opportunity to have provided these services to Blue Sage Environmental for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A Korosec

Michael A. Korosec
President

1210 Eastside Street SE, Suite 200 ■ Olympia, Washington 98501 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.esnnw.com* E-Mail: *info@esnnw.com*

ESN NORTHWEST CHEMISTRY LABORATORY

Blue Sage Environmental
PROJECT BUD CLARY SUBARU
Longview, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil by Method NWTPH-Dx/Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank	9/12/2018	9/12/2018	114	nd	nd
LCS	9/12/2018	9/12/2018	117	70%	---
B1-10	9/12/2018	9/12/2018	119	nd	nd
B1-15	9/12/2018	9/12/2018	116	nd	nd
B2-10	9/12/2018	9/12/2018	114	nd	nd
B2-15	9/12/2018	9/12/2018	125	nd	nd
B3-10	9/12/2018	9/12/2018	92	nd	nd
B3-15	9/12/2018	9/12/2018	116	nd	nd
B4-10	9/12/2018	9/12/2018	121	nd	nd
B4-15	9/12/2018	9/12/2018	117	nd	nd
B4-15 Duplicate	9/12/2018	9/12/2018	124	nd	nd
Reporting Limits				50	100

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Blue Sage Environmental
PROJECT BUD CLARY SUBARU
Longview, Washington

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260

Sample Number	Date Prepared	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline Range Organics (mg/kg)	Surrogate Recovery (%)
Method Blank	8/30/2018	8/30/2018	nd	nd	nd	nd	nd	104
LCS	8/30/2018	8/30/2018	78%	82%	100%	102%	109%	102
LCSD	8/30/2018	8/30/2018	80%	84%	104%	107%	---	102
B1-10	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	108
B1-15	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	105
B2-10	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	106
B2-15	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	104
B2-15 Duplicate	8/29/2018	8/30/2018	nd	**0.53**	**0.12**	**0.61**	nd	102
B3-10	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	101
B3-15	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	103
B4-10	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	105
B4-15	8/29/2018	8/30/2018	nd	nd	nd	nd	nd	105
Reporting Limits			0.02	0.05	0.05	0.15	10	

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS : 65% TO 135%

ESN NORTHWEST CHEMISTRY LABORATORY

Blue Sage Environmental
PROJECT BUD CLARY SUBARU
Longview, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Total Lead in Soil by Method 6020A/3050B

Sample Number	Date Prepared	Date Analyzed	Lead (Pb) (mg/kg)
Method Blank	8/31/2018	8/31/2018	nd
B1-10	8/29/2018	8/31/2018	nd
B2-10	8/29/2018	8/31/2018	nd
B3-10	8/29/2018	8/31/2018	nd
B4-10	8/29/2018	8/31/2018	nd
Reporting Limit			5.0

"nd" Indicates not detected at listed detection limits.

QA/QC Data - Analysis of Total Metals in Soil by Method 6020A/3050B

Sample Number: QC Batch

	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead (Pb)	88.9	87.3	98.2	99.0	101	102	3.82

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 75%-125%

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead (Pb)	100	97.5	97.5

ACCEPTABLE RECOVERY LIMITS FOR LABORATORY CONTROL SAMPLES: 80%-120%
ACCEPTABLE RPD IS 20%

ESN NORTHWEST, INC. Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: BUD CLARY SUBARU (BSE)
ADDRESS: LONGVIEW
PHONE: _____ FAX: _____
CLIENT PROJECT #: _____ PROJECT MANAGER: AKOCH

DATE: 8/29/18 PAGE _____ OF _____
PROJECT NAME: BUD CLARY SUBARU
LOCATION: LONGVIEW
COLLECTOR: AHK DATE OF COLLECTION: 8/29/18

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. B1-10	10	1030	SOIL	VOA/4OZ		X	X	X								X							3	
2. B1-15	15	↓	↓	↓		X	X	X															3	
3. B2-10	10					X	X	X								X							3	
4. B2-15	15					X	X	X															3	
5. B3-10	10					X	X	X								X							3	
6. B3-15	15					X	X	X															3	
7. B4-10	10					X	X	X								X							3	
8. B4-15	15	1215	↓	↓		X	X	X															3	
9.																								
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
AHK	8/29/18	Julie Cook	8/30/18
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

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ESN NORTHWEST
Environmental
Services Network

May 13, 2019

Alex Koch
Blue Sage Environmental
198007 E 30th Ave
Kennewick, WA 99337

Dear Mr. Koch:

Please find enclosed the analytical data reports for the Subaru Groundwater Project in Longview, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx and BTEX by Method 8260 on May 2, 2019.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. A copy of the invoice for this work is enclosed for your records.

ESN Northwest appreciates the opportunity to have provided these services to Blue Sage Environmental for this project. If you have any further questions about the data report, please give us a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

1210 Eastside Street SE, Suite 200 ■ Olympia, Washington 98501 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: *www.esnnw.com* E-Mail: *info@esnnw.com*

ESN NORTHWEST CHEMISTRY LABORATORY

Bud Clary
PROJECT SUBARU GROUNDWATER
Longview, Washington

ESN Northwest
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lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil
by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank	5/2/2019	5/2/2019	94	nd	nd
LCS	5/2/2019	5/2/2019	69	111%	---
B6-15	5/2/2019	5/2/2019	63	nd	nd
B7-13	5/2/2019	5/2/2019	81	**14,000**	**370,000**
B7-15	5/2/2019	5/2/2019	74	**210**	**30,000**
B8-11	5/2/2019	5/2/2019	95	**4200**	**210,000**
B8-15	5/2/2019	5/2/2019	56	nd	nd
B9-11	5/2/2019	5/2/2019	63	nd	nd
B10-15	5/2/2019	5/2/2019	57	nd	nd
B10-15 Duplicate	5/2/2019	5/2/2019	57	nd	nd
Reporting Limits				50	100

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Bud Clary
PROJECT SUBARU GROUNDWATER
Longview, Washington

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Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260

Sample Number	Date Prepared	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline Range Organics (mg/kg)	Surrogate Recovery (%)
Method Blank	4/29/2019	5/2/2019	nd	nd	nd	nd	nd	114
LCS	4/29/2019	5/2/2019	105%	99%	117%	113%	149%	110
LCSD	4/29/2019	5/2/2019	106%	99%	115%	117%	---	110
B6-15	4/29/2019	5/2/2019	nd	nd	nd	nd	nd	107
B7-13	4/29/2019	5/2/2019	**0.09**	**0.48**	**1.4**	**5.8**	**5700**	122
B7-15	4/29/2019	5/2/2019	**0.08**	**0.05**	nd	nd	**11**	109
B8-11	4/29/2019	5/2/2019	nd	nd	nd	nd	**5900**	114
B8-15	4/29/2019	5/2/2019	nd	nd	nd	nd	nd	107
B9-11	4/29/2019	5/2/2019	nd	nd	nd	nd	nd	116
B10-15	4/29/2019	5/2/2019	nd	nd	nd	nd	nd	109
B10-15 Duplicate	4/29/2019	5/2/2019	nd	nd	nd	nd	nd	104
Reporting Limits			0.02	0.05	0.05	0.15	10	

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS : 65% TO 135%

ESN NORTHWEST, INC. Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: BUDCLARY AUTO GROUP (BCS) | DATE: 4-29-19 | PAGE ____ OF ____

ADDRESS: LONGVIEW | PROJECT NAME: SUBARU GROUNDWATER

PHONE: ____ FAX: ____ | LOCATION: LONGVIEW

CLIENT PROJECT #: ____ PROJECT MANAGER: AKOCH | COLLECTOR: AHK | DATE OF COLLECTION: 4/29/19

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. BCS-B6-15	15	820	SOIL	VOA/4OZ		X	X	X															3	
2. BCS-B7-13	13	915	↓	↓		↓	↓	↓															3	
3. BCS-B7-15	15	920																					3	
4. BCS-B8-11	11	1000																					3	
5. BCS-B8-15	15	1005																					3	
6. BCS-B9-11	11	1045																					3	
7. BCS-B10-15	15	1110	↓	↓		↓	↓	↓															3	
8.																								
9.																								
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	5/1/19	[signature]	5-1-19
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

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May 4,2021

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Alex,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Four soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx-Ext, Gas/BTEX by EPA Method NWTPH-Gx and 8260D and EPH by WA EPH Method on April 16, 2021-May 3, 2021.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

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ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Soil

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CONTENTS

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SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
B-11-13	S210416.R2	04/15/21	1100	S	Diesel, Gas/BTEX, EPH
B-11-17	S210416.R2	04/15/21	1105	S	Diesel, Gas/BTEX, EPH
B-12-13	S210416.R2	04/15/21	1215	S	Diesel, Gas/BTEX, EPH
B-12-17	S210416.R2	04/15/21	1220	S	Diesel, Gas/BTEX, EPH

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TEST RESULTS

Sampling date: April 15, 2021

Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil by Method NWTPH-Dx/Dx Extended

Sample Number	Date Collected	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank		4/16/2021	4/16/2021	122	nd	nd
LCS		4/16/2021	4/16/2021	75	67%	---
B-11-13	4/15/2021	4/16/2021	4/16/2021	100	nd	**6000**
B-11-17	4/15/2021	4/16/2021	4/16/2021	72	nd	nd
B-12-13	4/15/2021	4/16/2021	4/16/2021	110	nd	**5200**
B-12-17	4/15/2021	4/16/2021	4/16/2021	76	nd	nd
B-12-17 DUP	4/15/2021	4/16/2021	4/16/2021	91	nd	nd
Reporting Limits					50	100

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%
Analyst: Loan H

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260D

Sample Number	Date Collected	Date Prepared	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline Range Organics (mg/kg)	Surrogate Recovery (%)
Method Blank		4/21/2021	4/21/2021	nd	nd	nd	nd	nd	118
LCS		4/21/2021	4/21/2021	108%	95%	93%	86%	77%	115
LCSD		4/21/2021	4/21/2021	98%	92%	93%	84%	---	126
B-11-13	4/15/2021	4/15/2021	4/21/2021	nd	nd	nd	nd	**48**	105
B-11-17	4/15/2021	4/15/2021	4/21/2021	nd	nd	nd	nd	nd	114
B-12-13	4/15/2021	4/15/2021	4/21/2021	nd	**0.05**	**0.21**	**1.2**	**420**	105
B-12-17	4/15/2021	4/15/2021	4/21/2021	nd	nd	nd	nd	nd	122
B-12-17 DUP	4/15/2021	4/15/2021	4/21/2021	nd	nd	nd	nd	nd	116
Reporting Limits				0.02	0.05	0.05	0.15	10	

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS : 65% TO 135%
Analyst: Loan H

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THIRD PARTY LABORATORY RESULT

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

Work Order Case Narrative

Extractable Organic Hydrocarbons - WA-Ecology

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits with the exception of analytes flagged on the associated forms.

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-11-13	21D0189-01	Solid	15-Apr-2021 11:00	16-Apr-2021 10:17
B-11-17	21D0189-02	Solid	15-Apr-2021 11:05	16-Apr-2021 10:17
B-12-13	21D0189-03	Solid	15-Apr-2021 12:15	16-Apr-2021 10:17
B-12-17	21D0189-04	Solid	15-Apr-2021 12:30	16-Apr-2021 10:17

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

B-11-13
21D0189-01 (Solid)

Washington Department of Ecology Methods

Method: WA EPH			Sampled: 04/15/2021 11:00
Instrument: FID8 Analyst: JGR			Analyzed: 04/26/2021 17:42
Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21D0189-01 A 01
	Preparation Batch: BJD0437	Sample Size: 10.01 g (wet)	Dry Weight:6.98 g
	Prepared: 04/19/2021	Final Volume: 1 mL	% Solids: 69.76
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21D0189-01 A 01
	Cleanup Batch: CJD0274	Initial Volume: 1 mL	
	Cleaned: 23-Apr-2021	Final Volume: 1 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics	ALI-C8-C10	5	14300	ND	ug/kg	U
C10-C12 Aliphatics	ALI-C10-C12	5	14300	20500	ug/kg	D
C12-C16 Aliphatics	ALI-C12-C16	5	14300	30700	ug/kg	D
C16-C21 Aliphatics	ALI-C16-C21	5	14300	248000	ug/kg	D
C21-C34 Aliphatics	ALI-C21-C34	5	14300	3320000	ug/kg	D
Surrogate: 1-Chloro-octadecane			*30-160 %*	*52.7*	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics	ARO-C8-C10	1	2860	ND	ug/kg	U
C10-C12 Aromatics	ARO-C10-C12	1	2860	ND	ug/kg	U
C12-C16 Aromatics	ARO-C12-C16	1	2860	4180	ug/kg	
C16-C21 Aromatics	ARO-C16-C21	1	2860	63000	ug/kg	
C21-C34 Aromatics	ARO-C21-C34	1	2860	460000	ug/kg	
Surrogate: o-Terphenyl			*30-160 %*	*57.5*	%	

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

B-11-17
21D0189-02 (Solid)

Washington Department of Ecology Methods

Method: WA EPH — Sampled: 04/15/2021 11:05
Instrument: FID8 Analyst: JGR — Analyzed: 04/26/2021 19:22

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21D0189-02 A 01
Preparation Batch: BJD0437 — Sample Size: 10.02 g (wet) — Dry Weight:8.01 g
Prepared: 04/19/2021 — Final Volume: 1 mL — % Solids: 79.96

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 21D0189-02 A 01
Cleanup Batch: CJD0274 — Initial Volume: 1 mL
Cleaned: 23-Apr-2021 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics	ALI-C8-C10	1	2500	ND	ug/kg	U
C10-C12 Aliphatics	ALI-C10-C12	1	2500	ND	ug/kg	U
C12-C16 Aliphatics	ALI-C12-C16	1	2500	ND	ug/kg	U
C16-C21 Aliphatics	ALI-C16-C21	1	2500	6430	ug/kg	
C21-C34 Aliphatics	ALI-C21-C34	1	2500	86100	ug/kg	
Surrogate: 1-Chloro-octadecane			*30-160 %*	*67.3*	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics	ARO-C8-C10	1	2500	ND	ug/kg	U
C10-C12 Aromatics	ARO-C10-C12	1	2500	ND	ug/kg	U
C12-C16 Aromatics	ARO-C12-C16	1	2500	ND	ug/kg	U
C16-C21 Aromatics	ARO-C16-C21	1	2500	2800	ug/kg	
C21-C34 Aromatics	ARO-C21-C34	1	2500	15700	ug/kg	
Surrogate: o-Terphenyl			*30-160 %*	*74.2*	%	

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

B-12-13
21D0189-03 (Solid)

Washington Department of Ecology Methods

Method: WA EPH			Sampled: 04/15/2021 12:15
Instrument: FID8 Analyst: JGR			Analyzed: 04/26/2021 18:07
Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		Extract ID: 21D0189-03 A 01
	Preparation Batch: BJD0437	Sample Size: 10.02 g (wet)	Dry Weight:8.12 g
	Prepared: 04/19/2021	Final Volume: 1 mL	% Solids: 81.05
Sample Cleanup:	Cleanup Method: Silica Gel		Extract ID: 21D0189-03 A 01
	Cleanup Batch: CJD0274	Initial Volume: 1 mL	
	Cleaned: 23-Apr-2021	Final Volume: 1 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics	ALI-C8-C10	10	24600	30000	ug/kg	D
C10-C12 Aliphatics	ALI-C10-C12	10	24600	146000	ug/kg	D
C12-C16 Aliphatics	ALI-C12-C16	10	24600	188000	ug/kg	D
C16-C21 Aliphatics	ALI-C16-C21	10	24600	1100000	ug/kg	D
C21-C34 Aliphatics	ALI-C21-C34	10	24600	17400000	ug/kg	D
Surrogate: 1-Chloro-octadecane			*30-160 %*	*69.3*	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics	ARO-C8-C10	1	2460	ND	ug/kg	U
C10-C12 Aromatics	ARO-C10-C12	1	2460	7910	ug/kg	
C12-C16 Aromatics	ARO-C12-C16	1	2460	17900	ug/kg	
C16-C21 Aromatics	ARO-C16-C21	1	2460	166000	ug/kg	
C21-C34 Aromatics	ARO-C21-C34	1	2460	1190000	ug/kg	
Surrogate: o-Terphenyl			*30-160 %*	*60.0*	%	

3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

B-12-17
21D0189-04 (Solid)

Washington Department of Ecology Methods

Method: WA EPH — Sampled: 04/15/2021 12:30
Instrument: FID8 Analyst: JGR — Analyzed: 04/26/2021 19:48

Sample Preparation: Preparation Method: EPA 3546 (Microwave) — Extract ID: 21D0189-04 A 01
Preparation Batch: BJD0437 — Sample Size: 10.02 g (wet) — Dry Weight:8.21 g
Prepared: 04/19/2021 — Final Volume: 1 mL — % Solids: 81.98

Sample Cleanup: Cleanup Method: Silica Gel — Extract ID: 21D0189-04 A 01
Cleanup Batch: CJD0274 — Initial Volume: 1 mL
Cleaned: 23-Apr-2021 — Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aliphatics	ALI-C8-C10	1	2430	ND	ug/kg	U
C10-C12 Aliphatics	ALI-C10-C12	1	2430	ND	ug/kg	U
C12-C16 Aliphatics	ALI-C12-C16	1	2430	ND	ug/kg	U
C16-C21 Aliphatics	ALI-C16-C21	1	2430	ND	ug/kg	U
C21-C34 Aliphatics	ALI-C21-C34	1	2430	3710	ug/kg	
Surrogate: 1-Chloro-octadecane			*30-160 %*	*69.5*	%	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
C8-C10 Aromatics	ARO-C8-C10	1	2430	ND	ug/kg	U
C10-C12 Aromatics	ARO-C10-C12	1	2430	ND	ug/kg	U
C12-C16 Aromatics	ARO-C12-C16	1	2430	ND	ug/kg	U
C16-C21 Aromatics	ARO-C16-C21	1	2430	ND	ug/kg	U
C21-C34 Aromatics	ARO-C21-C34	1	2430	ND	ug/kg	U
Surrogate: o-Terphenyl			*30-160 %*	*80.9*	%	

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Analytical Resources, Incorporated
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Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

Washington Department of Ecology Methods - Quality Control

Batch BJD0437 - EPA 3546 (Microwave)

Instrument: FID8 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BJD0437-BLK1)				Prepared: 19-Apr-2021	Analyzed: 26-Apr-2021 16:52					
C8-C10 Aliphatics	ND	2000	ug/kg							U
C10-C12 Aliphatics	ND	2000	ug/kg							U
C12-C16 Aliphatics	ND	2000	ug/kg							U
C16-C21 Aliphatics	ND	2000	ug/kg							U
C21-C34 Aliphatics	ND	2000	ug/kg							U
Surrogate: 1-Chloro-octadecane	7570		ug/kg	*15000*		*50.5*	*30-160*			
Blank (BJD0437-BLK2)				Prepared: 19-Apr-2021	Analyzed: 26-Apr-2021 20:13					
C8-C10 Aromatics	ND	2000	ug/kg							U
C10-C12 Aromatics	ND	2000	ug/kg							U
C12-C16 Aromatics	ND	2000	ug/kg							U
C16-C21 Aromatics	ND	2000	ug/kg							U
C21-C34 Aromatics	ND	2000	ug/kg							U
Surrogate: o-Terphenyl	7800		ug/kg	*15000*		*52.0*	*30-160*			
LCS (BJD0437-BS1)				Prepared: 19-Apr-2021	Analyzed: 26-Apr-2021 17:17					
C8-C10 Aliphatics	5690	2000	ug/kg	15000		37.9	25-130			
C10-C12 Aliphatics	5840	2000	ug/kg	15000		38.9	23-130			
C12-C16 Aliphatics	8060	2000	ug/kg	15000		53.7	44.5-130			
C16-C21 Aliphatics	10900	2000	ug/kg	15000		72.6	52-130			
C21-C34 Aliphatics	12800	2000	ug/kg	15000		85.3	31-130			
Surrogate: 1-Chloro-octadecane	7370		ug/kg	*15000*		*49.1*	*30-160*			
LCS (BJD0437-BS2)				Prepared: 19-Apr-2021	Analyzed: 26-Apr-2021 20:38					
C10-C12 Aromatics	6340	2000	ug/kg	15000		42.3	20-130			
C12-C16 Aromatics	6970	2000	ug/kg	15000		46.5	38-130			
C16-C21 Aromatics	25400	2000	ug/kg	30000		84.7	51-130			
C21-C34 Aromatics	10900	2000	ug/kg	15000		72.5	41-130			
Surrogate: o-Terphenyl	7950		ug/kg	*15000*		*53.0*	*30-160*			
Matrix Spike (BJD0437-MS1)	**Source: 21D0189-01**			Prepared: 19-Apr-2021	Analyzed: 26-Apr-2021 18:32					
C8-C10 Aliphatics	17600	14300	ug/kg	21500	ND	82.0	25-130			D
C10-C12 Aliphatics	43800	14300	ug/kg	21500	20500	108	23-130			D
C12-C16 Aliphatics	53200	14300	ug/kg	21500	30700	104	44.5-130			D

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Analytical Resources, Incorporated
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Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

Washington Department of Ecology Methods - Quality Control

Batch BJD0437 - EPA 3546 (Microwave)

Instrument: FID8 Analyst: JGR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BJD0437-MS1)	**Source: 21D0189-01**		Prepared: 19-Apr-2021 Analyzed: 26-Apr-2021 18:32							
C16-C21 Aliphatics	326000	14300	ug/kg	21500	248000	360	52-130			*, D
C21-C34 Aliphatics	4470000	14300	ug/kg	21500	3320000	5340	31-130			*, D
Surrogate: 1-Chloro-octadecane	12500		ug/kg	*21500*	*11300*	*58.3*	*30-160*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike (BJD0437-MS2)	**Source: 21D0189-01**		Prepared: 19-Apr-2021 Analyzed: 26-Apr-2021 21:54							
C10-C12 Aromatics	10500	2870	ug/kg	21500	ND	39.5	20-130			
C12-C16 Aromatics	17700	2870	ug/kg	21500	4180	62.7	38-130			
C16-C21 Aromatics	113000	2870	ug/kg	43000	63000	117	51-130			
C21-C34 Aromatics	603000	2870	ug/kg	21500	460000	661	41-130			*
Surrogate: o-Terphenyl	13600		ug/kg	*21500*	*12400*	*63.3*	*30-160*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BJD0437-MSD1)	**Source: 21D0189-01**		Prepared: 19-Apr-2021 Analyzed: 26-Apr-2021 18:57							
C8-C10 Aliphatics	16500	14300	ug/kg	21500	ND	76.7	25-130	6.72	30	D
C10-C12 Aliphatics	46900	14300	ug/kg	21500	20500	122	23-130	6.80	30	D
C12-C16 Aliphatics	58400	14300	ug/kg	21500	30700	129	44.5-130	9.38	30	D
C16-C21 Aliphatics	349000	14300	ug/kg	21500	248000	468	52-130	6.88	30	*, D
C21-C34 Aliphatics	4490000	14300	ug/kg	21500	3320000	5470	31-130	0.61	30	*, D
Surrogate: 1-Chloro-octadecane	11300		ug/kg	*21500*	*11300*	*52.7*	*30-160*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										
Matrix Spike Dup (BJD0437-MSD2)	**Source: 21D0189-01**		Prepared: 19-Apr-2021 Analyzed: 26-Apr-2021 22:19							
C10-C12 Aromatics	10700	2870	ug/kg	21500	ND	40.1	20-130	1.22	30	
C12-C16 Aromatics	17800	2870	ug/kg	21500	4180	63.4	38-130	0.89	30	
C16-C21 Aromatics	120000	2870	ug/kg	43000	63000	134	51-130	6.23	30	*
C21-C34 Aromatics	650000	2870	ug/kg	21500	460000	883	41-130	7.61	30	*
Surrogate: o-Terphenyl	13200		ug/kg	*21500*	*12400*	*61.2*	*30-160*			
Recovery limits for target analytes in MS/MSD QC samples are advisory only.										

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Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

Certified Analyses included in this Report

Analyte	Certifications
WA EPH in Solid	
C8-C10 Aliphatics	WADOE,DoD-ELAP,NELAP
C8-C10 Aliphatics	WADOE,DoD-ELAP,NELAP
C8-C10 Aliphatics	WADOE,DoD-ELAP
C8-C10 Aliphatics	DoD-ELAP,NELAP
C10-C12 Aliphatics	WADOE,DoD-ELAP
C10-C12 Aliphatics	DoD-ELAP,NELAP
C10-C12 Aliphatics	WADOE,DoD-ELAP,NELAP
C10-C12 Aliphatics	WADOE,DoD-ELAP,NELAP
C12-C16 Aliphatics	WADOE,DoD-ELAP,NELAP
C12-C16 Aliphatics	WADOE,DoD-ELAP,NELAP
C12-C16 Aliphatics	WADOE,DoD-ELAP
C12-C16 Aliphatics	DoD-ELAP,NELAP
C16-C21 Aliphatics	WADOE,DoD-ELAP,NELAP
C16-C21 Aliphatics	DoD-ELAP,NELAP
C16-C21 Aliphatics	WADOE,DoD-ELAP,NELAP
C16-C21 Aliphatics	WADOE,DoD-ELAP
C21-C34 Aliphatics	WADOE,DoD-ELAP,NELAP
C21-C34 Aliphatics	WADOE,DoD-ELAP
C21-C34 Aliphatics	DoD-ELAP,NELAP
C21-C34 Aliphatics	WADOE,DoD-ELAP,NELAP
C8-C10 Aromatics	DoD-ELAP,WADOE
C8-C10 Aromatics	DoD-ELAP,NELAP,WADOE
C8-C10 Aromatics	DoD-ELAP,NELAP,WADOE
C8-C10 Aromatics	DoD-ELAP,NELAP
C10-C12 Aromatics	DoD-ELAP,NELAP,WADOE
C10-C12 Aromatics	DoD-ELAP,WADOE
C10-C12 Aromatics	DoD-ELAP,NELAP
C10-C12 Aromatics	DoD-ELAP,NELAP,WADOE
C12-C16 Aromatics	DoD-ELAP,WADOE
C12-C16 Aromatics	DoD-ELAP,NELAP
C12-C16 Aromatics	DoD-ELAP,NELAP,WADOE
C12-C16 Aromatics	DoD-ELAP,NELAP,WADOE
C16-C21 Aromatics	DoD-ELAP,NELAP,WADOE
C16-C21 Aromatics	DoD-ELAP,WADOE
C16-C21 Aromatics	DoD-ELAP,NELAP

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Report

ESN Analytical	Project: Subaru (Blue Sage)	
3155 NE Sunset BLVD #A	Project Number: Subaru (Blue Sage)	**Reported:**
Renton WA, 98056	Project Manager: ESN Analytical	03-May-2021 17:34

C16-C21 Aromatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aromatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aromatics	DoD-ELAP,NELAP,WADOE
C21-C34 Aromatics	DoD-ELAP,WADOE
C21-C34 Aromatics	DoD-ELAP,NELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/28/2022

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

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S210416.21

ESN NORTHWEST Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: Bluesage Env.
ADDRESS:
PHONE: EMAIL akoch19672@gmail.com
CLIENT PROJECT #: PROJECT MANAGER: Alex Koch

DATE: 4/15/21 PAGE 1 OF 1
PROJECT NAME: Subaru Longview
LOCATION:
COLLECTOR: Haley Carter DATE OF COLLECTION: 4/15/21

Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-DIESEL AND OIL	TPH-GASOLINE	BTEX 8260	VOC 8260CL	VOC 8260	SEMIVOC 8270	PAH's 8270	PCB's 8082	CL PESTICIDES 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	ASBESTOS PLM	GRO Suite 830-1	DRO Suite 830-1	WO Suite 830-1	EPH
1. B-11-13	13	1100	S	3voa/1AG/2402	X	X	X															X
2. B-11-17	17	1105	↓	↓	X	X	X															X
3. B-12-13	13	1215	↓	↓	X	X	X															X
4. B-12-17	17	1220	↓	↓	X	X	X															X
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
16.																						
17.																						
18.																						

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	4/16/21 932	[signature]	4/16/21 9:25
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

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Website: www.esnnw.com
E-Mail: lab@esnnw.com

ESN ANALYTICAL

APPENDIX F

Groundwater Analytical Laboratory Reports

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

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Web: www.esnanalytical.com

April 12, 2021

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Alex,

Please find enclosed analytical data report for PROJECT: **Rainier 76** located in Seattle, WA. Four water samples were analyzed for Gas/BTEX by EPA Method NWTPH-Gx and 8260D April 9, 2021.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

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ANALYTICAL DATA REPORT

Project: RAINIER 76

Location: Seattle, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water

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SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-6	S210331.1R	03/31/21	1000	W	Gas/BTEX
MW-3	S210331.1R	03/31/21	1110	W	Gas/BTEX
MW-7	S210331.1R	03/31/21	1050	W	Gas/BTEX
MW-2	S210331.1R	03/31/21	1035	W	Gas/BTEX

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TEST RESULTS

Sampling date: March 31,2021

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260

Sample Number	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank	4/9/2021	nd	nd	nd	nd	nd	100
LCS	4/9/2021	108%	102%	104%	99%	100%	95
LCSD	4/9/2021	89%	83%	83%	80%	---	93
MW6	4/9/2021	**190**	**4.1**	**5.1**	**8.7**	**710**	98
MW3	4/9/2021	**8.8**	nd	**1.1**	nd	nd	103
MW3 Duplicate	4/9/2021	**8.4**	nd	**1.2**	nd	nd	103
MW7	4/9/2021	**39**	**20**	**130**	**85**	**2000**	95
MW2	4/9/2021	**9200**	**27**	**97**	**26**	**10,000**	101
Trip Blank	4/9/2021	nd	nd	nd	nd	nd	102
Reporting Limits		1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%

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Olympia

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: BlueSage Environmental
ADDRESS:
PHONE: FAX:
CLIENT PROJECT #: [redacted] PROJECT MANAGER: ALEX KOCH

DATE: 3/31/2021 PAGE 1 OF 1
PROJECT NAME: RAINIER 76
LOCATION: Seattle
COLLECTOR: HC DATE OF COLLECTION: 3/31/21

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. MW6		1070	Water			X	X	X																
2. MW3		1110	Water			X	X	X																
3. MW7		1050	Water			X	X	X																
4. MW2		1035	Water			X	X	X																
5.																								
6.																								
7.																								
8.																								
9.																								
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18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	3/31/21 1300	[signature]	3/31/2021 1300
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

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ESN ANALYTICAL

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June 30, 2021

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Alex,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples and two soil vapor samples were analyzed for Diesel by EPA Method NWTPH-Dx/Dx-Ext, Gas/BTEX by NWTPH-Gx/BTEX by 8260D, Sulfate by EPA Method 375.4, Nitrate by Method SM 4500 NO3 F and BTEX N/APH by Method TO-15/APH on June 18,2021- June 29,2021.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

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ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water, Soil Vapor

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CONTENTS

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SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S210618. R1	06/17/21	1130	W	Diesel, Gas/BTEX, Sulfate, Nitrate
MW-2	S210618. R1	06/17/21	1200	W	Diesel, Gas/BTEX, Sulfate, Nitrate
MW-3	S210618. R1	06/17/21	1225	W	Diesel, Gas/BTEX, Sulfate, Nitrate
MW-4	S210618. R1	06/17/21	1325	W	Diesel, Gas/BTEX, Sulfate, Nitrate
MW-5	S210618. R1	06/17/21	1315	W	Diesel, Gas/BTEX
SV-2	S210618. R1	06/17/21	Initial Time: 1050 Final Time: 1100	SV	TO-15 BTEXN/APH
SV-1	S210618. R1	06/17/21	Initial Time: 1100 Final Time: 1110	SV	TO-15 BTEXN /APH

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TEST RESULTS

Sampling date: June 17, 2021

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx Extended

Sample Number	Date Collected	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank		6/18/2021	6/18/2021	81	nd	nd
LCS		6/18/2021	6/18/2021	113	143%	---
MW-1	6/17/2021	6/18/2021	6/18/2021	121	nd	nd
MW-2	6/17/2021	6/18/2021	6/18/2021	114	nd	nd
MW-3	6/17/2021	6/18/2021	6/18/2021	119	nd	nd
MW-4	6/17/2021	6/18/2021	6/18/2021	116	nd	nd
MW-5	6/17/2021	6/18/2021	6/18/2021	119	nd	nd
Reporting Limits					100	250

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%
Analyst: Jennifer A.

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260

Sample Number	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank	6/23/2021	nd	nd	nd	nd	nd	97
LCS	6/23/2021	74%	107%	96%	110%	98%	95
LCSD	6/23/2021	79%	88%	94%	88%	---	96
MW-1	6/23/2021	nd	nd	nd	nd	nd	96
MW-2	6/23/2021	nd	nd	nd	nd	nd	95
MW-3	6/23/2021	nd	nd	nd	nd	nd	96
MW-4	6/23/2021	nd	nd	nd	nd	nd	97
MW-5	6/23/2021	nd	nd	nd	nd	nd	93
MW-5 Duplicate	6/23/2021	nd	nd	nd	nd	nd	95
Reporting Limits		1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%
Analyst: Jennifer A.

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SPECTRA Laboratories

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Web site: www.spectra-lab.com E-mail: info@spectra-lab.com

INORGANIC CHEMICALS(IOC's) REPORT
STATE OF WASHINGTON

System ID:	System Name: Subaru Longview	DOH Source:
Lab Sample #: 0	Date Collected: 06/17/2021	Purpose:
Multiple Source #:	Sample Type:	Supervisor:
Date Received: 06/18/2021	Date Reported: 06/29/2021	Analyst:
County:	Date Analyzed: 06/17/2021	Group:
Sample Location: MW-1		
Report to: ESN Analytical 3155 NE Sunset Blvd Olympia, WA 98501		Spectra Project # 2021060599

DOH	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method	Analyst
							TRIGGER	MCL		
1	Nitrate	<0.10*	mg/L-N	0.00000	0.00000	0.00000	No	No	SM 4500 NO3 F	010
1	Sulfate	75	mg/L	2.0	250	250	No	No	EPA 375.4	KLH

*Analyzed by Spectra Laboratories - Kitsap. Please see the complete report attached.

NOTES:

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for further information.

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

NA (Not Analyzed): In the results column, indicates this compound was not included in the current analysis.

ND (Not Detected): In the results column, indicates this compound was analyzed and not detected at a level greater than or equal to the SRL

< (0.00X) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

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INORGANIC CHEMICALS(IOC's) REPORT
STATE OF WASHINGTON

System ID:	System Name: Subaru Longview	DOH Source:
Lab Sample #: 0	Date Collected: 06/17/2021	Purpose:
Multiple Source #:	Sample Type:	Supervisor:
Date Received: 06/18/2021	Date Reported: 06/29/2021	Analyst:
County:	Date Analyzed: 06/17/2021	Group:
Sample Location: MW-2		
Report to: ESN Analytical 3155 NE Sunset Blvd Olympia, WA 98501		Spectra Project # 2021060599

DOH	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method	Analyst
							TRIGGER	MCL		
2	Nitrate	0.31*	mg/L-N	0.00000	0.00000	0.00000	Yes	Yes	SM 4500 NO3 F	010
2	Sulfate	460	mg/L	2.0	250	250	Yes	Yes	EPA 375.4	KLH

*Analyzed by Spectra Laboratories - Kitsap. Please see the complete report attached.

NOTES:

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for further information.

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

NA (Not Analyzed): In the results column, indicates this compound was not included in the current analysis.

ND (Not Detected): In the results column, indicates this compound was analyzed and not detected at a level greater than or equal to the SRL

< (0.00X) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

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INORGANIC CHEMICALS(IOC's) REPORT
STATE OF WASHINGTON

System ID:	System Name: Subaru Longview	DOH Source:
Lab Sample #: 0	Date Collected: 06/17/2021	Purpose:
Multiple Source #:	Sample Type:	Supervisor:
Date Received: 06/18/2021	Date Reported: 06/29/2021	Analyst:
County:	Date Analyzed: 06/17/2021	Group:
Sample Location: MW-3		
Report to: ESN Analytical 3155 NE Sunset Blvd Olympia, WA 98501		Spectra Project # 2021060599

DOH	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method	Analyst
							TRIGGER	MCL		
3	Nitrate	0.26*	mg/L-N	0.00000	0.00000	0.00000	Yes	Yes	SM 4500 NO3 F	010
3	Sulfate	330	mg/L	2.0	250	250	Yes	Yes	EPA 375.4	KLH

*Analyzed by Spectra Laboratories - Kitsap. Please see the complete report attached.

NOTES:

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for further information.

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

NA (Not Analyzed): In the results column, indicates this compound was not included in the current analysis.

ND (Not Detected): In the results column, indicates this compound was analyzed and not detected at a level greater than or equal to the SRL

< (0.00X) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

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INORGANIC CHEMICALS(IOC's) REPORT
STATE OF WASHINGTON

System ID:	System Name: Subaru Longview	DOH Source:
Lab Sample #: 0	Date Collected: 06/17/2021	Purpose:
Multiple Source #:	Sample Type:	Supervisor:
Date Received: 06/18/2021	Date Reported: 06/29/2021	Analyst:
County:	Date Analyzed: 06/17/2021	Group:
Sample Location: MW-4		
Report to: ESN Analytical 3155 NE Sunset Blvd Olympia, WA 98501		Spectra Project # 2021060599

DOH	ANALYTES	RESULTS	UNITS	SRL	TRIGGER	MCL	EXCEEDS		Method	Analyst
							TRIGGER	MCL		
4	Nitrate	0.41*	mg/L-N	0.00000	0.00000	0.00000	Yes	Yes	SM 4500 NO3 F	010
4	Sulfate	10.5	mg/L	2.0	250	250	No	No	EPA 375.4	KLH

*Analyzed by Spectra Laboratories - Kitsap. Please see the complete report attached.

NOTES:

SRL (State Reporting Level): The minimum reporting level established by the Washington State Department of Health (DOH)

Trigger Level: DOH Drinking Water response level. Systems with compounds detected at concentrations in excess of this level may be required to take additional samples or monitor more frequently. Please contact your DOH drinking water regional office for further information.

MCL (maximum contaminant level): If the contaminant amount exceeds the MCL, please contact your regional DOH office to determine follow-up actions.

NA (Not Analyzed): In the results column, indicates this compound was not included in the current analysis.

ND (Not Detected): In the results column, indicates this compound was analyzed and not detected at a level greater than or equal to the SRL

< (0.00X) : The compound was not detected in the sample at or above the concentration indicated (usually the lab MRL).

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June 21, 2021

ESN Analytical
3155 NE Sunset Blvd, Suite A
Olympia, WA 98501

Sample Matrix: Water
Spectra Project # 2021060599
Applies to Sample # 1-4

WATER
QUALITY CONTROL RESULTS
CONVENTIONALS

Analyte	Method	Date	Analyst	Method Blank Result	LCS % Rec.	Control Limits	Batch Duplicate RPD	Control Limits
Sulfate	SM 4500-S04 E/EPA 375.4	06/21/21	KLH	<2.0 mg/L	93.3	85-114	1.32	≤20

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SPECTRA Laboratories - Kitsap

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Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2021060599
Sampler
Date Received 06/22/2021

Analyte: **Nitrate-N** Date Analyzed: 6/29/2021
Method: SM 4500 NO3 F Analyst: KW

Sample No.	Client ID	Result	Qualifiers	Units	PQL	Sampled	Matrix
209530-01	060599-1	<0.10	PR1	mg/L	0.012	06/17/21	Water
209530-02	060599-2	0.31	PR1	mg/L	0.012	06/17/21	Water
209530-03	060599-3	0.26	PR1	mg/L	0.012	06/17/21	Water
209530-04	060599-4	0.41	PR1	mg/L	0.012	06/17/21	Water

PR1 - Sample preserved within method defined holding time.
Tacoma NO2-N Results: <0.01 mg/L

Lab Qualifiers Comments:

Approved By Angela Kaelin
Lab Supervisor/ QA Manager

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SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2021060599
Sampler
Date Received 06/22/2021

QC Results Summary

	Test	Test Date	Type of QC	Result
1918	**Nitrate-N**	**6/29/2021**	Blank: Blank	0.0
			Matrix Spike Rec	100.2
			Matrix Spike Rec Dup	100.4
			Matrix Spike RPD	0.2
			Standard: LCS	Pass

Approved By Angela Kaelin

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SOIL VAPOR ANALYSIS RESULT

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 18, 2020 by Friedman & Bruya, Inc. from the ESN Analytical Subaru Longview project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	ESN Analytical
106323 -01	SV-2
106323 -02	SV-1

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

All quality control requirements were acceptable.

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SV-2	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-01 1/5.3
Date Analyzed:	06/21/21	Data File:	062127.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<400
APH EC9-12 aliphatics	220
APH EC9-10 aromatics	<130

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SV-1	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-02 1/4.9
Date Analyzed:	06/21/21	Data File:	062128.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<370
APH EC9-12 aliphatics	160
APH EC9-10 aromatics	<120

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	ESN Analytical
Date Received:	Not Applicable	Project:	Subaru Longview, F&BI 106323
Date Collected:	Not Applicable	Lab ID:	01-1226 MB
Date Analyzed:	06/21/21	Data File:	062121.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SV-2	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-01 1/5.3
Date Analyzed:	06/21/21	Data File:	062127.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.7	<0.53
Toluene	<100	<26
Ethylbenzene	3.5	0.81
m,p-Xylene	16	3.7
o-Xylene	5.9	1.4
Naphthalene	<1.4	<0.26

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SV-1	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-02 1/4.9
Date Analyzed:	06/21/21	Data File:	062128.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.6	<0.49
Toluene	<92	<24
Ethylbenzene	<2.1	<0.49
m,p-Xylene	7.9	1.8
o-Xylene	2.9	0.67
Naphthalene	<1.3	<0.24

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	ESN Analytical
Date Received:	Not Applicable	Project:	Subaru Longview, F&BI 106323
Date Collected:	Not Applicable	Lab ID:	01-1226 MB
Date Analyzed:	06/21/21	Data File:	062121.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.26	<0.05

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/28/21
Date Received: 06/18/21
Project: Subaru Longview, F&BI 106323

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 106322-01 1/5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	<370	<370	nm
APH EC9-12 aliphatics	ug/m3	<120	<120	nm
APH EC9-10 aromatics	ug/m3	<120	<120	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	84	70-130
APH EC9-12 aliphatics	ug/m3	67	103	70-130
APH EC9-10 aromatics	ug/m3	67	95	70-130

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/28/21
Date Received: 06/18/21
Project: Subaru Longview, F&BI 106323

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 106322-01 1/5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Benzene	ug/m3	<1.6	<1.6	nm
Toluene	ug/m3	<94	<94	nm
Ethylbenzene	ug/m3	<2.2	<2.2	nm
m,p-Xylene	ug/m3	<4.3	<4.3	nm
o-Xylene	ug/m3	<2.2	<2.2	nm
Naphthalene	ug/m3	<1.3	<1.3	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	80	70-130
Toluene	ug/m3	51	83	70-130
Ethylbenzene	ug/m3	59	74	70-130
m,p-Xylene	ug/m3	120	79	70-130
o-Xylene	ug/m3	59	81	70-130
Naphthalene	ug/m3	71	86	70-130

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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ESN NORTHWEST Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: Subaru Longview (BSE)
ADDRESS:
PHONE: EMAIL: Ahoch19672@gmail.com
CLIENT PROJECT #: PROJECT MANAGER: Alex Hoch

DATE: 6/18/21 PAGE 1 OF 1
PROJECT NAME: Subaru Longview
LOCATION: Longview
COLLECTOR: HE DATE OF COLLECTION: 6/17/21

Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-DIESEL AND OIL	TPH-GASOLINE	BTEX 8260	VOC 8260CL	VOC 8260	SEMIVOC 8270	PAH's 8270	PCB's 8082	CL PESTICIDES 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	ASBESTOS PLM	GRO Suite 830-1	DRO Suite 830-1	WO Suite 830-1	Sulfate	Nitrate
1. MW-1		1130				X	X	X													X	X	
2. MW-2		1200				X	X	X													X	X	
3. MW-3		1235				X	X	X													X	X	
4. MW-4		1305				X	X	X													X	X	
5. MW-5		1315				X	X	X													X	X	
6.																							
7.																							
8.																							
9.																							
10.																							
11.																							
12.																							
13.																							
14.																							
15.																							
16.																							
17.																							
18.																							

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	6/18/21 940	[signature]	6/18/21 9:45 am
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432
Website: www.esnnw.com
E-Mail: lab@esnnw.com

ESN ANALYTICAL

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Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

SAMPLE CHAIN OF CUSTODY

Report To Subaru Longview (BSE)
Company BSE
Address
City, State, ZIP
Phone Email Jhoch19672@gmail.com

SAMPLERS (signature)
PROJECT NAME & ADDRESS: Subaru Longview
PO #
NOTES:
INVOICE TO: Subaru Longview

Page # 1 of 1

TURNAROUND TIME
☒ Standard
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium		Notes
SV-2		8232	220	IA / (SG)	6/17/21	-30	1050	-3	1100		X		X			
SV-1		8210	228	IA / (SG)	6/17/21	-28	1100	0	1110		X		X			
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		HALEY CARTER	BSE	6/18/21	940
Received by:		Loan Thai	ESN	6/18/21	9:45am
Relinquished by:					
Received by:		Nhan Phan	FEBT	6/18/21	1320

3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
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Web: www.esnanalytical.com

September 29, 2021

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Mr. Koch,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples were analyzed for Gas/BTEX by EPA Method NWTPH-Gx and 8260D, Diesel and Oil by NWTPH-Dx/Dx-Ext, Sulfate by SM Method SO4 E and Nitrate by SM Method NO3 F on September 22,2021- September 24, 2021.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

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Renton, WA 98056
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ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water

3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

CONTENTS

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Web: www.esnanalytical.com

SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S210921. R1	09/21/21	1030	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-2	S210921. R1	09/21/21	1100	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-3	S210921. R1	09/21/21	1130	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-4	S210921. R1	09/21/21	1200	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-5	S210921. R1	09/21/21	1230	W	Gas/BTEX, Diesel, Sulfate, Nitrate

3155 NE Sunset Blvd, Suite A
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Web: www.esnanalytical.com

TEST RESULTS

Sampling date: September 21, 2021

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260D

Sample Number	Date Collected	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank		9/23/2021	nd	nd	nd	nd	nd	110
LCS		9/23/2021	94%	82%	85%	84%	80%	94
LCSD		9/23/2021	85%	79%	77%	78%	---	97
MW-1	9/21/2021	9/23/2021	nd	nd	nd	nd	nd	93
MW-2	9/21/2021	9/23/2021	nd	nd	nd	nd	nd	89
MW-3	9/21/2021	9/23/2021	nd	nd	nd	nd	nd	95
MW-4	9/21/2021	9/23/2021	nd	nd	nd	nd	nd	95
MW-5	9/21/2021	9/23/2021	nd	nd	nd	nd	nd	106
MW-5dup	9/21/2021	9/23/2021	nd	nd	nd	nd	nd	99
Reporting Limits			1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%
Analyst: Loan H.

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx/Dx Extended

Sample Number	Date Collected	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank		9/22/2021	9/22/2021	141	nd	nd
LCS		9/22/2021	9/22/2021	146	67%	---
MW-1	9/21/2021	9/22/2021	9/22/2021	139	nd	nd
MW-2	9/21/2021	9/22/2021	9/22/2021	148	nd	nd
MW-3	9/21/2021	9/22/2021	9/22/2021	143	nd	nd
MW-4	9/21/2021	9/22/2021	9/22/2021	140	nd	nd
MW-5	9/21/2021	9/22/2021	9/22/2021	149	nd	nd
Reporting Limits					250	250

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%
Analyst: Loan H.

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09/29/2021

ESN Analytical
3155 NE Sunset Blvd
Suite A
Olympia, WA 98501

Project: Subaru Longview
Sample Matrix: Water
Date Sampled: 09/21/2021
Date Received: 09/22/2021
Spectra Project: 2021090648

Client ID	Spectra #	Analyte	Result	Units	Method	Analyzed
MW-1	1	Nitrate	<0.10*	mg/L-N	SM 4500 NO3 F	09/24/2021
MW-1	1	Sulfate	19.7	mg/L	SM 4500-SO4⁻ E	09/23/2021
MW-2	2	Nitrate	<0.10*	mg/L-N	SM 4500 NO3 F	09/24/2021
MW-2	2	Sulfate	400	mg/L	SM 4500-SO4⁻ E	09/23/2021
MW-3	3	Nitrate	<0.10*	mg/L-N	SM 4500 NO3 F	09/24/2021
MW-3	3	Sulfate	790	mg/L	SM 4500-SO4⁻ E	09/23/2021
MW-4	4	Nitrate	0.49*	mg/L-N	SM 4500 NO3 F	09/24/2021
MW-4	4	Sulfate	16.5	mg/L	SM 4500-SO4⁻ E	09/23/2021
MW-5	5	Nitrate	<0.10*	mg/L-N	SM 4500 NO3 F	09/24/2021
MW-5	5	Sulfate	760	mg/L	SM 4500-SO4⁻ E	09/23/2021

*Analyzed by Spectra Laboratories-Kitsap. See complete report attached.

SPECTRA LABORATORIES

Marie Holt

Ben Fruns, Laboratory Manager
Marie Holt, Customer Support & Proj. Manager

a7/stb

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Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2021090648
Sampler
Date Received 09/23/2021

Client ID: 090648-1 **Lab No: 212157-01** **Sample Date: 09/21/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500 NO3 F	<0.10	---	mg/L	0.1	9/24/2021	KW

Client ID: 090648-2 **Lab No: 212157-02** **Sample Date: 09/21/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500 NO3 F	<0.10	---	mg/L	0.1	9/24/2021	KW

Client ID: 090648-3 **Lab No: 212157-03** **Sample Date: 09/21/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500 NO3 F	<0.10	---	mg/L	0.1	9/24/2021	KW

Client ID: 090648-4 **Lab No: 212157-04** **Sample Date: 09/21/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500 NO3 F	0.49	---	mg/L	0.10	9/24/2021	KW

Client ID: 090648-5 **Lab No: 212157-05** **Sample Date: 09/21/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500 NO3 F	<0.10	---	mg/L	0.1	9/24/2021	KW

Tacoma NO2-N Results: <0.01 mg/L

Lab Qualifiers Comments:

Approved By Kecia Whitehall

Kecia Whitehall
Chief Chemist

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Web: www.esnanalytical.com

SPECTRA Laboratories - Kitsap

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Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2021090648
Sampler
Date Received 09/23/2021

QC Results Summary

	Test	Test Date	Type of QC	Result
2376	Nitrate-N	9/24/2021	Blank: Blank	0.0
			Matrix Spike Rec	38.5
			Matrix Spike Rec Dup	76.1
			Matrix Spike RPD	65.7
			Standard: LCS	Pass

Approved By Kecia Whitehall

Kecia Whitehall
Chief Chemist

ESN ANALYTICAL

CHAIN-OF-CUSTODY

CLIENT: Subaru Longview (BSE)

ADDRESS:

PHONE: EMAIL:

CLIENT PROJECT #: PROJECT MANAGER: Alex Koch

DATE: 9/22/21 PAGE 1 OF 1

PROJECT NAME: Subaru Longview

LOCATION: Longview

COLLECTOR: HC DATE OF COLLECTION: 9/21/21

ANALYSES

Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-Diesel & Oil	TPH-Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH 8270	PCB 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	GRO Suite	DRO Suite	Waste Oil Suite	Dissolved Fe/Mn	NOTES	Total Numb of Containers	Laboratory Note Number
1. MW-1		1030			X	X	X												X			5	
2. MW-2		1100			X	X	X												X			5	
3. MW-3		1130			X	X	X												X			5	
4. MW-4		1200			X	X	X												X			5	
5. MW-5		1230			X	X	X												X			5	
6.																							
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18.																							

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	9/22/21 824		9/22/21 82
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

3155 NE SUNSET BLVD, SUITE A, RENTON WA 98056 | PHONE: 425-207-8345 | EMAIL: lab@esnanalyticcal.com | WEB: www.esnanalytical.com

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December 15, 2021

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Mr. Koch,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples were analyzed for Gas/BTEX by EPA Method NWTPH-Gx and 8260D, Diesel and Oil by NWTPH-Dx/Dx-Ext, Sulfate by SM Method SO4 E and Nitrate by SM Method NO3 F on December 9,2021- December 17, 2021.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

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ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water

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CONTENTS

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SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S211209.1	09/21/21	1030	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-2	S211209.1	09/21/21	1105	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-3	S211209.1	09/21/21	1140	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-4	S211209.1	09/21/21	1205	W	Gas/BTEX, Diesel, Sulfate, Nitrate
MW-5	S211209.1	09/21/21	1240	W	Gas/BTEX, Diesel, Sulfate, Nitrate

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TEST RESULTS

Sampling date: December 8, 2021

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx/Dx Extended

Sample Number	Date Collected	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank		12/9/2021	12/9/2021	132	nd	nd
LCS		12/9/2021	12/9/2021	114	79%	---
MW-1	12/8/2021	12/9/2021	12/9/2021	141	nd	nd
MW-2	12/8/2021	12/9/2021	12/9/2021	139	nd	nd
MW-3	12/8/2021	12/9/2021	12/9/2021	142	nd	nd
MW-4	12/8/2021	12/9/2021	12/9/2021	142	nd	nd
MW-5	12/8/2021	12/9/2021	12/9/2021	88	nd	nd
Reporting Limits					100	250

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%
Analyst: Loan H.

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260D

Sample Number	Date Collected	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank		12/13/2021	nd	nd	nd	nd	nd	94
LCS		12/13/2021	121%	111%	105%	109%	99%	104
MW-1	12/8/2021	12/13/2021	nd	nd	nd	nd	nd	108
MW-2	12/8/2021	12/13/2021	nd	nd	nd	nd	nd	127
MW-3	12/8/2021	12/13/2021	nd	nd	nd	nd	nd	126
MW-4	12/8/2021	12/13/2021	nd	nd	nd	nd	nd	129
MW-5	12/8/2021	12/13/2021	nd	nd	nd	nd	nd	111
MW-5 dup	12/8/2021	12/13/2021	nd	nd	nd	nd	nd	126
Reporting Limits			1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%
Analyst: Loan H.

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SPECTRA Laboratories - Kitsap
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Spectra Labs - Kitsap, LLC (Poulsbo)
26276 Twelve Trees Ln NW Ste. C
Poulsbo, WA 98370
Phone: (360) 779-5141
www.spectra-lab.com

Spectra Labs - Kitsap, LLC (Poulsbo) received samples from Spectra Laboratories LLC on Friday, December 10, 2021 at 2:10 pm. Unless otherwise noted, all samples were received in good condition and were tested in accordance with the laboratory's quality control procedures. A summary of the samples received are outlined below.

Sample No.	Description	Location	Sampled
214152-01	2021120215	MW-1	12/08/2021 10:30
214152-02	2021120215	MW-2	12/08/2021 11:05
214152-03	2021120215	MW-3	12/08/2021 11:40
214152-04	2021120215	MW-4	12/08/2021 12:05
214152-05	2021120215	MW-5	12/08/2021 12:40

This report package contains laboratory sample results and any attachments listed below. If you have any questions please call (360) 779-5141 or email us at www.spectra-lab.com.

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12/21/2021

ESN Analytical
3155 NE Sunset Blvd
Suite A
Renton, WA 98056

P.O.#: COD
Project: Subaru Longview
Sample Matrix: Water
Date Sampled: 12/08/2021
Date Received: 12/09/2021
Spectra Project: 2021120215

Client ID	Spectra #	Analyte	Result	Units	Method	Analyzed
MW-1	1	Sulfate	31.4*	mg/L	EPA 300.0	12/17/2021
MW-1	1	Nitrate	0.225*	mg/L-N	SM 4500-NO3 F	12/17/2021
MW-2	2	Sulfate	361*	mg/L	EPA 300.0	12/17/2021
MW-2	2	Nitrate	0.222*	mg/L-N	SM 4500-NO3 F	12/17/2021
MW-3	3	Sulfate	197*	mg/L	EPA 300.0	12/17/2021
MW-3	3	Nitrate	0.418*	mg/L-N	SM 4500-NO3 F	12/17/2021
MW-4	4	Sulfate	6.66*	mg/L	EPA 300.0	12/17/2021
MW-4	4	Nitrate	0.697*	mg/L-N	SM 4500-NO3 F	12/17/2021
MW-5	5	Sulfate	113*	mg/L	EPA 300.0	12/17/2021
MW-5	5	Nitrate	<0.1*	mg/L-N	SM 4500-NO3 F	12/17/2021

* Analyzed by Spectra Laboratories-Kitsap. See complete report provided.

SPECTRA LABORATORIES

Ben Frans, Laboratory Manager

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Renton, WA 98056
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Email: lab@esnanalytical.com
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SPECTRA Laboratories - Kitsap
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Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2021120215
Sampler
Date Received 12/10/2021

Client ID: MW-1 **Lab No: 214152-01** **Sample Date: 12/08/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500-N03 F	0.225	B1	mg/L	0.100	12/17/2021	KW
Sulfate	EPA 300.0	31.4	---	mg/L	4.00	12/17/2021	SZ

Client ID: MW-2 **Lab No: 214152-02** **Sample Date: 12/08/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500-N03 F	0.222	B1	mg/L	0.100	12/17/2021	KW
Sulfate	EPA 300.0	361	---	mg/L	50.0	12/17/2021	SZ

Client ID: MW-3 **Lab No: 214152-03** **Sample Date: 12/08/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500-N03 F	0.418	B1	mg/L	0.100	12/17/2021	KW
Sulfate	EPA 300.0	197	---	mg/L	50.0	12/17/2021	SZ

Client ID: MW-4 **Lab No: 214152-04** **Sample Date: 12/08/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500-N03 F	0.697	B1	mg/L	0.100	12/17/2021	KW
Sulfate	EPA 300.0	6.66	---	mg/L	1.00	12/17/2021	SZ

Client ID: MW-5 **Lab No: 214152-05** **Sample Date: 12/08/21**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	SM 4500-N03 F	<0.1	B1	mg/L	0.100	12/17/2021	KW
Sulfate	EPA 300.0	113	---	mg/L	10.0	12/17/2021	SZ

3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2021120215
Sampler
Date Received 12/10/2021

B1 - Method Blank result is greater than the MDL/RL. All sample results are at least 10X greater than the Method Blank.

Lab Qualifiers Comments:

Approved By Kecia Whitehall

Kecia Whitehall
Chief Chemist

3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 2021120215
Sampler
Date Received 12/10/2021

QC Results Summary

	Test	Test Date	Type of QC	Result
2712	Nitrate-N	12/17/2021	Blank: Blank	0.0
			Matrix Spike Rec	95.3
			Matrix Spike Rec Dup	93.2
			Matrix Spike RPD	2.2
			Standard: LCS	Pass
2713	Sulfate	12/17/2021	Blank: Blank	0.0
			Matrix Spike Rec	89.9
			Matrix Spike Rec Dup	91.5
			Matrix Spike RPD	1.8
			Standard: LCS	Pass

Approved By Kecia Whitehall
Chief Chemist

ESN NORTHWEST Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: Subaru Longview (BSE)
ADDRESS:
PHONE: EMAIL
CLIENT PROJECT #: PROJECT MANAGER:

DATE: 12/8/21 PAGE 1 OF 1
PROJECT NAME: Subaru Longview
LOCATION: Longview
COLLECTOR: HC DATE OF COLLECTION: 12/8/21

Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-DIESEL AND OIL	TPH-GASOLINE	BTEX 8260	VOC 8260CL	VOC 8260	SEMIVOC 8270	PAH's 8270	PCB's 8082	CL PESTICIDES 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	ASBESTOS PLM	GRO Suite 830-1	DRO Suite 830-1	WO Suite 830-1	SUBMIT ALL UNUSED TESTS
1. MW-1		1030	GW		X	X	X														X	
2. MW-2		1105			X	X	X														X	
3. MW-3		1146			X	X	X														X	
4. MW-4		1205			X	X	X														X	
5. MW-5		1240			X	X	X														X	
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
16.																						
17.																						
18.																						

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	12/9/21 1221		12/9/21 1225
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432
Website: www.esnnw.com
E-Mail: lab@esnnw.com

ESN ANALYTICAL
3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

Libby Environmental, Inc.
3322 South Bay Road NE • Olympia, WA 98506-2957

April 20, 2022

Alex Koch
Blue Sage Environmental, Inc.
198007 E 30th Avenue
Kennewick. Washington 99337

Dear Mr. Koch:

Please find enclosed the analytical data report for the Subaru Longview Project located in Longview, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Phone (360) 352-2110 • Fax (360) 352-4154 • libbyenv@gmail.com

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Client: Subaru Longview (Clary) (Blue Sage Env)
Address:
City: State: Zip:
Phone: Fax:
Client Project #

Date: 3/31/22 Page: 1 of 1
Project Manager: Alex Hoch
Project Name: Subaru Longview
Location: Longview, WA City, State:
Collector: Haley Carter Date of Collection: 3/31/22
Email: AHoch19672@gmail.com (509) 947-4059

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	PCE & Daughter Prod.	NWTPH-Gx	BTEX (8260) / (8021)	NWTPH-HCID	NWTPH-Dx / Dx	PCB 8082	MTCA 5 Metals	RCRA 8 Metals	c PAH 8270	PAH 8270	Semi Vol 8270	Nitrate / Sulfate		Field Notes
1	MW-1		1110	GW				X	X	X							X			
2	MW-2		1135					X	X	X							X			
3	MW-3		1200					X	X	X							X			
4	MW-4		1230					X	X	X							X			
5	MW-5		1300					X	X	X							X			
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
	3/31/22 1435		3/31/22 1435
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks:

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - Originator

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

SUBARU LONGVIEW PROJECT
Blue Sage Environmental
Longview, Washington
Libby Project # L22C138

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description		Method Blank	MW-1	MW-1 Dup	MW-2	MW-3	MW-4
Date Sampled		N/A	3/31/2022	3/31/2022	3/31/2022	3/31/2022	3/31/2022
Date Analyzed	PQL (µg/L)	4/1/2022 (µg/L)	4/1/2022 (µg/L)	4/1/2022 (µg/L)	4/1/2022 (µg/L)	4/1/2022 (µg/L)	4/1/2022 (µg/L)
Benzene	1.0	nd	nd	nd	nd	nd	nd
Toluene	3.0	nd	nd	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd	nd	nd
Total Xylenes	3.0	nd	nd	nd	nd	nd	nd
Gasoline	100	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		108	81	115	117	118	115
1,2-Dichloroethane-d4		120	72	130	129	132	126
Toluene-d8		100	99	109	102	104	106
4-Bromofluorobenzene		90	100	94	91	95	99

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Matthew Hansen

Libby Environmental, Inc.

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SUBARU LONGVIEW PROJECT
Blue Sage Environmental
Longview, Washington
Libby Project # L22C138

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description		MW-5	Method Blank
Date Sampled		3/31/2022	N/A
Date Analyzed	PQL (µg/L)	4/4/2022 (µg/L)	4/4/2022 (µg/L)
Benzene	1.0	nd	nd
Toluene	2.0	nd	nd
Ethylbenzene	1.0	nd	nd
Total Xylenes	2.0	nd	nd
Gasoline	100	140	nd
Surrogate Recovery			
Dibromofluoromethane		119	120
1,2-Dichloroethane-d4		99	113
Toluene-d8		99	100
4-Bromofluorobenzene		96	96

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

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SUBARU LONGVIEW PROJECT
Blue Sage Environmental
Longview, Washington
Libby Project # L22C138

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Matrix Spike Sample Identification: MW-1

Date Analyzed: 4/1/2022

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Benzene	5.0	5.5	5.2	110	104	5.6	65-135	
Toluene	5.0	5.8	5.4	117	108	7.8	65-135	
Ethylbenzene	5.0	5.4	5.4	108	108	0.4	65-135	
Total Xylenes	15.0	18.1	17.6	120	117	2.5	65-135	

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	83	86	65-135
1,2-Dichloroethane-d4	74	77	65-135
Toluene-d8	100	101	65-135
4-Bromofluorobenzene	102	102	65-135

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Matthew Hansen

Laboratory Control Sample

Date Analyzed: 4/1/2022

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	5.0	5.4	108	80-120	
Toluene	5.0	5.4	108	80-120	
Ethylbenzene	5.0	4.9	97	80-120	
Total Xylenes	15.0	15.2	101	80-120	

Surrogate Recovery		
Dibromofluoromethane	115	65-135
1,2-Dichloroethane-d4	126	65-135
Toluene-d8	104	65-135
4-Bromofluorobenzene	97	65-135

ANALYSES PERFORMED BY: Matthew Hansen

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
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Email: libbyenv@gmail.com

SUBARU LONGVIEW PROJECT
Blue Sage Environmental
Longview, Washington
Libby Project # L22C138

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Matrix Spike Sample Identification: L22D002-02

Date Analyzed: 4/4/2022

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Benzene	5.0	4.3	4.2	86	85	1.6	65-135	
Toluene	5.0	4.3	5.9	86	117	30.7	65-135	
Ethylbenzene	5.0	3.9	5.5	78	109	33.5	65-135	
Total Xylenes	15.0	13.9	20.9	93	139	40.2	65-135	R, S

Surrogate Recovery (%)	MS	MSD	
Dibromofluoromethane	116	117	65-135
1,2-Dichloroethane-d4	100	102	65-135
Toluene-d8	97	99	65-135
4-Bromofluorobenzene	100	97	65-135

ACCEPTABLE RPD IS 35%
"R" High relative percent difference observed.
"S" Spike compound recovery is outside acceptance limits.

ANALYSES PERFORMED BY: Paul Burke

Laboratory Control Sample

Date Analyzed: 4/4/2022

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	5.0	4.1	82	80-120	
Toluene	5.0	4.1	82	80-120	
Ethylbenzene	5.0	4.4	88	80-120	
Total Xylenes	15.0	13.4	89	80-120	

Surrogate Recovery			
Dibromofluoromethane	116	65-135	
1,2-Dichloroethane-d4	103	65-135	
Toluene-d8	98	65-135	
4-Bromofluorobenzene	99	65-135	

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

SUBARU LONGVIEW PROJECT
Blue Sage Environmental
Longview, Washington
Libby Project # L22C138

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (µg/L)	Oil (µg/L)
Method Blank	4/5/2022	46	nd	nd
MW-1	4/5/2022	61	nd	nd
MW-2	4/5/2022	38 S	nd	nd
MW-3	4/5/2022	79	nd	nd
MW-4	4/5/2022	55	nd	nd
MW-5	4/5/2022	77	nd	nd
Practical Quantitation Limit			200	400

"nd" Indicates not detected at the listed detection limits.
"S" Spike compound recovery is outside acceptance limits (High Bias). Sample is nd, no further action required.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 42% TO 150%

ANALYSES PERFORMED BY: Randolph Kraus

Libby Environmental, Inc.

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

SUBARU LONGVIEW PROJECT
Blue Sage Environmental
Libby Project # L22C138
Date Received 3/31/22 14:25

Received By AR

Sample Receipt Checklist

Chain of Custody

1. Is the Chain of Custody complete?	☑ Yes	☐ No	
2. How was the sample delivered?	☑ Hand Delivered	☐ Picked Up	☐ Shipped

Log In

3. Cooler or Shipping Container is present.	☑ Yes	☐ No	☐ N/A
4. Cooler or Shipping Container is in good condition.	☑ Yes	☐ No	☐ N/A
5. Cooler or Shipping Container has Custody Seals present.	☐ Yes	☑ No	☐ N/A
6. Was an attempt made to cool the samples?	☑ Yes	☐ No	☐ N/A
7. Temperature of cooler (0°C to 8°C recommended)	2.0 °C		
8. Temperature of sample(s) (0°C to 8°C recommended)	11.1 °C		
9. Did all containers arrive in good condition (unbroken)?	☑ Yes	☐ No	
10. Is it clear what analyses were requested?	☑ Yes	☐ No	
11. Did container labels match Chain of Custody?	☑ Yes	☐ No	
12. Are matrices correctly identified on Chain of Custody?	☑ Yes	☐ No	
13. Are correct containers used for the analysis indicated?	☑ Yes	☐ No	
14. Is there sufficient sample volume for indicated analysis?	☑ Yes	☐ No	
15. Were all containers properly preserved per each analysis?	☑ Yes	☐ No	
16. Were VOA vials collected correctly (no headspace)?	☑ Yes	☐ No	☐ N/A
17. Were all holding times able to be met?	☑ Yes	☐ No	

Discrepancies/ Notes

18. Was client notified of all discrepancies? ☐ Yes ☐ No ☑ N/A

Person Notified: _____ Date: _____

By Whom: _____ Via: _____

Regarding: _____

19. Comments. _____

SPECTRA Laboratories ...Where experience matters
2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

Spectra Labs - Tacoma received samples from Libby Environmental, Inc. on Friday, April 1, 2022 at 8:00 am. Unless otherwise noted, all samples were received in good condition and were tested in accordance with the laboratory's quality control procedures. A summary of the samples received are outlined below.

Sample No.	Description	Location	Sampled
301335-01		MW-1	03/31/2022 11:10
301335-02		MW-2	03/31/2022 11:35
301335-03		MW-3	03/31/2022 12:00
301335-04		MW-4	03/31/2022 12:30
301335-05		MW-5	03/31/2022 13:00

This report package contains laboratory sample results and any attachments listed below. If you have any questions please call (253) 272-4850 or email us at office@spectra-lab.com.

Attachments

01) Analytical Report: Spectra Laboratories- Poulsbo
02) Communication Record

Approved By Kristin Hintz

Kristin Hintz
Lab Technician

SPECTRA Laboratories ...Where experience matters
2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

Analytical Report

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506

Project Subaru Longview
PO Number
Date Received 04/01/2022

Client ID: MW-1 **Lab No: 301335-01** **Sample Date: 03/31/22 11:10**

Analyte	Method	Result	Units	PQL	Qualifiers	Analysis Date	Analyst
Sulfate	EPA 300.0	45.1	mg/L	3.01	---	4/11/2022	010
Nitrate-N	EPA 300.0	0.37	mg/L	0.033	---	4/2/2022	010

Client ID: MW-2 **Lab No: 301335-02** **Sample Date: 03/31/22 11:35**

Analyte	Method	Result	Units	PQL	Qualifiers	Analysis Date	Analyst
Nitrate-N	EPA 300.0	<0.10	mg/L	0.033	---	4/2/2022	010
Sulfate	EPA 300.0	198	mg/L	3.01	---	4/11/2022	010

Client ID: MW-3 **Lab No: 301335-03** **Sample Date: 03/31/22 12:00**

Analyte	Method	Result	Units	PQL	Qualifiers	Analysis Date	Analyst
Sulfate	EPA 300.0	122	mg/L	3.01	---	4/11/2022	010
Nitrate-N	EPA 300.0	<0.10	mg/L	0.033	---	4/2/2022	010

Client ID: MW-4 **Lab No: 301335-04** **Sample Date: 03/31/22 12:30**

Analyte	Method	Result	Units	PQL	Qualifiers	Analysis Date	Analyst
Sulfate	EPA 300.0	2.37	mg/L	0.301	---	4/15/2022	010
Nitrate-N	EPA 300.0	0.39	mg/L	0.033	---	4/15/2022	010

Client ID: MW-5 **Lab No: 301335-05** **Sample Date: 03/31/22 13:00**

Analyte	Method	Result	Units	PQL	Qualifiers	Analysis Date	Analyst
Nitrate-N	EPA 300.0	<0.10	mg/L	0.033	---	4/2/2022	010
Sulfate	EPA 300.0	119	mg/L	3.01	---	4/11/2022	010

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Analytical Report

Libby Environmental, Inc.
3322 South Bay Road NE
Olympia, WA 98506

Project Subaru Longview
PO Number
Date Received 04/01/2022

010 = Analyzed by Spectra Laboratories-Kitsap (Poulsbo). See complete report provided.

Lab Qualifiers Comments:

Libby Environmental, Inc.

Chain of Custody Record #301335

www.LibbyEnvironmental.com

3322 South Bay Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 3.31.22 Page: 1 of 1

Client: Libby Environmental, Inc
Address: (See Above)
City: State: Zip:
Phone: Fax:
Client Project # L22C138

Project Manager: Sherry Chilcutt
Project Name: Subaru Longview
Location: City, State: Longview, WA
Collector: HC Date of Collection:
Email: libbyenve@gmail.com

Sample Number	Depth	Time	Sample Type	Container Type	pH	Turbidity	Oil & Grease	Zinc, Copper	Zinc, Copper, Lead	TSS	BOD 5	Nitrate/Nitrite	Total Phosphorus	COD	TPH	Nitrate	Sulfate	Field Notes
1 MW-1	✓	1110	H2O	Poly											X	X		
2 MW-2	✓	1135													X	X		
3 MW-3	✓	1200													X	X		
4 MW-4	✓	1230													X	X		
5 MW-5	✓	1300													X	X		
6																		
7																		
8																		
9																		
10																		

Relinquished by:	Date / Time	Received by:	Date / Time
Melissa Nyt	4/1/22 0800	[signature] 8AM	4/1/22
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition?	Y	N
Cooler Temp.		°C
Sample Temp.		°C
Total Number of Containers		

Remarks:
Record pH here: STAT

T = 3.8C

LEGAL ACTION CLAUSE: *In the event of default of payment and/or failure to pay, Client agrees to pay the costs of collection including court costs and reasonable attorney fees to be determined by a court of law.*

Distribution: White - Lab, Yellow - Originator

SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 301335
Sampler
Date Received 04/01/2022

Client ID: 301335-01 **Lab No: 216611-01** **Sample Date: 03/31/22**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	EPA 300.0	0.37	---	mg/L	0.033	4/2/2022	SZ
Sulfate	EPA 300.0	45.1	---	mg/L	3.01	4/11/2022	SZ

Client ID: 301335-02 **Lab No: 216611-02** **Sample Date: 03/31/22**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	EPA 300.0	<0.10	---	mg/L	0.033	4/2/2022	SZ
Sulfate	EPA 300.0	198	---	mg/L	3.01	4/11/2022	SZ

Client ID: 301335-03 **Lab No: 216611-03** **Sample Date: 03/31/22**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	EPA 300.0	<0.10	---	mg/L	0.033	4/2/2022	SZ
Sulfate	EPA 300.0	122	---	mg/L	3.01	4/11/2022	SZ

Client ID: 301335-04 **Lab No: 216611-04** **Sample Date: 03/31/22**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	EPA 300.0	0.39	---	mg/L	0.033	4/2/2022	SZ
Sulfate	EPA 300.0	2.37	---	mg/L	0.301	4/2/2022	SZ

Client ID: 301335-05 **Lab No: 216611-05** **Sample Date: 03/31/22**

Analyte	Method	Result	Qualifiers	Units	PQL	Analysis Date	Analyst
Nitrate-N	EPA 300.0	<0.10	---	mg/L	0.033	4/2/2022	SZ
Sulfate	EPA 300.0	119	---	mg/L	3.01	4/11/2022	SZ

SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 301335
Sampler
Date Received 04/01/2022

Lab Qualifiers Comments:

Approved By Angela Kaelin

Angela Kaelin
Lab Supervisor/ QA Manager

SPECTRA Laboratories - Kitsap

...Where experience matters

Analytical Report

Spectra Laboratories LLC
2221 Ross Way
Tacoma, WA 98421

Project 301335
Sampler
Date Received 04/01/2022

QC Results Summary

	Test	Test Date	Type of QC	Result
3093	**Nitrate-N**	**4/2/2022**	Blank: Blank	0.0
			Matrix Spike Rec	100.8
			Matrix Spike Rec Dup	102.8
			Matrix Spike RPD	2.0
			Standard: LCS	Pass
3094	**Sulfate**	**4/2/2022**	Blank: Blank	0.0
			Matrix Spike Rec	98.3
			Matrix Spike Rec Dup	100.6
			Matrix Spike RPD	2.3
			Standard: LCS	Pass
3113	**Sulfate**	**4/11/2022**	Blank: Blank	0.0
			Matrix Spike Rec	95.3
			Matrix Spike Rec Dup	94.6
			Matrix Spike RPD	0.7
			Standard: LCS	Pass

Approved By Angela Kaelin

Angela Kaelin
Lab Supervisor/ QA Manager

SPECTRA Laboratories

2221 Ross Way, Tacoma, WA 98421
(253) 272-4850 Fax (253) 572-9838
www.spectra-lab.com info@spectra-lab.com

SPECIAL INSTRUCTIONS/COMMENTS:
Due 4/8/22

CHAIN of CUSTODY

216611

Return Samples Y ___ N x **Page** 1 **of** 1 **STANDARD** ☐ **RUSH** ☐

CLIENT: Spectra Laboratories ADDRESS: 2221 Ross Way Tacoma WA 98421 ADDRESS CHANGE ☐

PROJECT: 301335

CONTACT: Ben Frans

SUBBED TO: Poulsbo

PHONE: 253-272-4850 FAX: 253-572-9838

e-MAIL: office@spectra-lab.com Prefer FAX ☐ or e-MAIL ☐

PURCHASE ORDER #:

	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	MATRIX	NUMBER OF CONTAINERS	Drinking Water: Cyanide	TOTAL METALS (SPECIFY) Sodium	Fluoride	Nitrate	Nitrite	N + N	Color	Sulfate	Chloride	Other: T-Phos	Orthophos	N + N	Nitrate	Nitrite	Sulfate	BOD
1	301335-01	3-31-22	1110	water	2													X		X	
2	301335-02	3-31-22	1135	water	2													X		X	
3	301335-03	3-31-22	1200	water	2													X		X	
4	301335-04	3-31-22	1230	water	2													X		X	
5	301335-05	3-31-22	1300	water	2													X		X	
6																					
7																					
8																					
9																					
0																					

LAB USE ONLY

Shipped Via:
US Mail UPS Fed Ex Courier Client

Shipping Container:
Cooler Box Envelope None

Tracking #_____

Custody Seals: Y N Intact: Y N

Cooler Temp. _____ Sample Temp. _____

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
RELINQUISHED BY		Jen Draven	Spectra-T	4/1/22	1030
RECEIVED BY		Bruce McMullin	Spectra-T	4/1/22	1030
RELINQUISHED BY		Bruce McMullin	Spectra-T	4/1/22	216
RECEIVED BY	RR		Spectra-T	4/1/22	1416

Payment Terms: Net 30 days. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attorney's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. *Spectra Analytical, Inc.*

Office: 3155 NE Sunset Blvd, Suite A, Renton, WA 98056 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

June 10, 2022

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Alex,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples were analyzed for Gas/BTEX by EPA Method NWTPH-Gx and 8260D, Diesel and Oil by NWTPH-Dx/Dx-Ext, Nitrate by EPA Method 300.0 and Sulfate by EPA Method 300.0 on June 03, 2022- June 7,2022.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

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Web: www.esnanalytical.com

ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water

Office: 3155 NE Sunset Blvd, Suite A, Renton, WA 98056 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

CONTENTS

Office: 3155 NE Sunset Blvd, Suite A, Renton, WA 98056 | Office Number: 425.207.8345
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Web: www.esnanalytical.com

SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S220602.1	06/01/2022	1100	W	Gas/BTEX, Diesel and Oil, Nitrate, Sulfate
MW-2	S220602.1	06/01/2022	1130	W	Gas/BTEX, Diesel and Oil, Nitrate, Sulfate
MW-3	S220602.1	06/01/2022	1200	W	Gas/BTEX, Diesel and Oil, Nitrate, Sulfate
MW-4	S220602.1	06/01/2022	1220	W	Gas/BTEX, Diesel and Oil, Nitrate, Sulfate
MW-5	S220602.1	06/01/2022	1300	W	Gas/BTEX, Diesel and Oil, Nitrate, Sulfate

Office: 3155 NE Sunset Blvd, Suite A, Renton, WA 98056 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water
by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	6/3/2022	6/3/2022	89	nd	nd
LCS	6/3/2022	6/3/2022	108	124%	---
MW-1	6/3/2022	6/3/2022	119	nd	nd
MW-2	6/3/2022	6/3/2022	119	nd	nd
MW-3	6/3/2022	6/3/2022	120	nd	nd
MW-4	6/3/2022	6/3/2022	117	nd	nd
MW-5	6/3/2022	6/3/2022	129	nd	nd
Reporting Limits				100	250

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%
Analyst: Jennifer A.

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Email: lab@esnanalytical.com
Web: www.esnanalytical.com

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260D

Sample Number	Date Collected	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank		6/6/2022	nd	nd	nd	nd	nd	76
LCS		6/6/2022	109%	94%	91%	89%	77%	115
LCSD		6/6/2022	104%	88%	83%	86%	---	122
MW-1	6/1/2022	6/6/2022	nd	nd	nd	nd	nd	82
MW-1dup	6/1/2022	6/6/2022	nd	nd	nd	nd	nd	115
MW-2	6/1/2022	6/6/2022	nd	nd	nd	nd	nd	72
MW-3	6/1/2022	6/6/2022	nd	nd	nd	nd	nd	86
MW-4	6/1/2022	6/6/2022	nd	nd	nd	nd	nd	84
MW-5	6/1/2022	6/6/2022	nd	nd	nd	nd	nd	80
Reporting Limits			1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%
Analyst: DGA

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Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

ANALYSIS REPORT

ESN ANALYTICAL
3155 SUNSET BLVD
RENTON, WA 98056
Attention: DELY GRACE AGOY
Project Name: SUBARU LONGVIEW
PO Number: PAID
All results reported on an as received basis.

Date Received: 06/02/22
Date Reported: 6/ 9/22

AMTEST Identification Number **22-A008919**
Client Identification **MW-1**
Sampling Date **06/02/22, 11:00**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	43.8	mg/l		0.1	EPA 300.0	KS	06/06/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.673	mg/l		0.025	EPA 300.0	KS	06/03/22

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Email: lab@esnanalytical.com
Web: www.esnanalytical.com

ESN ANALYTICAL
Project Name: SUBARU LONGVIEW
AmTest ID: 22-A008920

AMTEST Identification Number **22-A008920**
Client Identification **MW-2**
Sampling Date **06/02/22, 11:30**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	141.	mg/l		0.1	EPA 300.0	KS	06/06/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.116	mg/l		0.025	EPA 300.0	KS	06/03/22

AMTEST Identification Number **22-A008921**
Client Identification **MW-3**
Sampling Date **06/02/22, 12:00**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	52.9	mg/l		0.1	EPA 300.0	KS	06/06/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.228	mg/l		0.025	EPA 300.0	KS	06/03/22

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Email: lab@esnanalytical.com
Web: www.esnanalytical.com

ESN ANALYTICAL
Project Name: SUBARU LONGVIEW
AmTest ID: 22-A008922

AMTEST Identification Number **22-A008922**
Client Identification **MW-4**
Sampling Date **06/02/22, 12:30**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	2.64	mg/l		0.1	EPA 300.0	KS	06/03/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.465	mg/l		0.025	EPA 300.0	KS	06/03/22

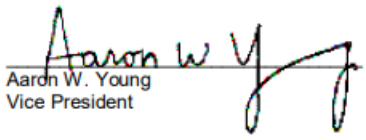
AMTEST Identification Number **22-A008923**
Client Identification **MW-5**
Sampling Date **06/02/22, 13:00**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	133.	mg/l		0.1	EPA 300.0	KS	06/06/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.050	mg/l		0.025	EPA 300.0	KS	06/03/22



Aaron W. Young
Vice President

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Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 22-A008919 to 22-A008923

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A008928	Sulfate	mg/l	787.	786.	0.13

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
22-A008928	Sulfate	mg/l	787.	1160	400.	93.25 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	2.00	1.92	96.0 %
Sulfate	mg/l	2.00	1.92	96.0 %
Sulfate	mg/l	2.00	1.88	94.0 %
Sulfate	mg/l	2.00	1.90	95.0 %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.025
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

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Web: www.esnanalytical.com

ESN NORTHWEST Environmental Services Network

S220602.1

CHAIN-OF-CUSTODY RECORD

CLIENT: Subaru Longview (BSE)
ADDRESS:
PHONE: EMAIL
CLIENT PROJECT #: PROJECT MANAGER: Alex Koch

DATE: 6/1/22 PAGE 1 OF 1
PROJECT NAME: Subaru Longview
LOCATION: Longview, WA
COLLECTOR: Haley Carter DATE OF COLLECTION: 6/1/22

Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-DIESEL AND OIL	TPH-GASOLINE	BTEX 8260	VOC 8260CL	VOC 8260	SEMIVOC 8270	PAH's 8270	PCB's 8082	CL PESTICIDES 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	ASBESTOS PLM	GRO Suite 830-1	DRO Suite 830-1	WO Suite 830-1	Nitrate & Sulfate				
1. MW-1		1100	GW		X	X	X														X	X				
2. MW-2		1130			X	X	X																			
3. MW-3		1200			X	X	X																			
4. MW-4		1230			X	X	X																			
5. MW-5		1300	↓		X	X	X																			
6.																										
7.																										
8.																										
9.																										
10.																										
11.																										
12.																										
13.																										
14.																										
15.																										
16.																										
17.																										
18.																										

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	6/1/22 1150		6/2/22 115
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432
Website: www.esnnw.com
E-Mail: lab@esnnw.com

ESN ANALYTICAL

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

October 4,2022

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Alex,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples were analyzed for Nitrate by EPA Method 300.0 and Sulfate by EPA Method 300.0 on September 29, 2022- October 3, 2022.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water

ANALYTICAL

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

CONTENTS

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
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Web: www.esnanalytical.com

SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S220928.2	09/28/2022	1145	W	Nitrate, Sulfate
MW-2	S220928.2	09/28/2022	1205	W	Nitrate, Sulfate
MW-3	S220928.2	09/28/2022	1225	W	Nitrate, Sulfate
MW-4	S220928.2	09/28/2022	1245	W	Nitrate, Sulfate
MW-5	S220928.2	09/28/2022	1310	W	Nitrate, Sulfate

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
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ANALYTICAL RESULT

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Professional Analytical Services

ANALYSIS REPORT

ESN ANALYTICAL
621 STRANDER BLVD
TUKWILA, WA 98188
Attention: DELY GRACE AGOY
Project Name: SUBARU LONGVIEW
All results reported on an as received basis.

Date Received: 09/28/22
Date Reported: 10/ 4/22

AMTEST Identification Number **22-A016533**
Client Identification **MW-1**
Sampling Date **09/28/22, 11:45**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	28.3	mg/l	D	1	EPA 300.0	AY	10/03/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.108	mg/l		0.025	EPA 300.0	AY	09/29/22

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Web: www.esnanalytical.com

ESN ANALYTICAL
Project Name: SUBARU LONGVIEW
AmTest ID: 22-A016534

AMTEST Identification Number **22-A016534**
Client Identification **MW-2**
Sampling Date **09/28/22, 12:05**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	189.	mg/l	D	10	EPA 300.0	AY	10/03/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	< 0.025	mg/l		0.025	EPA 300.0	AY	09/29/22

AMTEST Identification Number **22-A016535**
Client Identification **MW-3**
Sampling Date **09/28/22, 12:25**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	198.	mg/l	D	10	EPA 300.0	AY	10/03/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	< 0.025	mg/l		0.025	EPA 300.0	AY	09/29/22

ESN ANALYTICAL
Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

ESN ANALYTICAL
Project Name: SUBARU LONGVIEW
AmTest ID: 22-A016536

AMTEST Identification Number **22-A016536**
Client Identification **MW-4**
Sampling Date **09/28/22, 12:45**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	6.94	mg/l		0.1	EPA 300.0	AY	09/29/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	1.84	mg/l		0.025	EPA 300.0	AY	09/29/22

AMTEST Identification Number **22-A016537**
Client Identification **MW-5**
Sampling Date **09/28/22, 13:10**

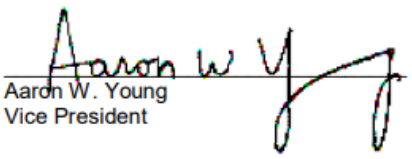
Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	234.	mg/l	D	10	EPA 300.0	AY	10/03/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	< 0.025	mg/l		0.025	EPA 300.0	AY	09/29/22

D = The reported value is from a dilution.



Aaron W. Young
Vice President

ESN ANALYTICAL
Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
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www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

QC Summary for sample numbers: 22-A016533 to 22-A016537

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A016487	Nitrate	mg/l	0.037	0.032	14.
22-A016636	Nitrate	mg/l	< 0.025	< 0.025	
22-A016636	Sulfate	mg/l	< 0.1	< 0.1	
22-A016725	Sulfate	mg/l	2.90	2.93	1.0

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
22-A016487	Nitrate	mg/l	0.037	2.03	2.00	99.65 %
22-A016636	Nitrate	mg/l	< 0.025	1.94	23.0	8.43 %
22-A016636	Sulfate	mg/l	< 0.1	2.15	2.00	107.50 %
22-A016725	Sulfate	mg/l	2.90	4.92	2.00	101.00 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	2.00	1.95	97.5 %
Sulfate	mg/l	2.00	2.06	103. %
Sulfate	mg/l	2.00	1.94	97.0 %
Sulfate	mg/l	2.00	1.95	97.5 %
Sulfate	mg/l	2.00	1.93	96.5 %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.025
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

S220928.2

CHAIN-OF-CUSTODY RECORD

Environmental Services Network

Subaru Longview (BSE)

.ESS: _____

ONE: _____ EMAIL _____

CLIENT PROJECT #: _____ PROJECT MANAGER: Alex Hoch

DATE: 9/28/22 PAGE 1 OF 1

PROJECT NAME: Subaru Longview

LOCATION: Longview

COLLECTOR: H. Carter DATE OF COLLECTION: 9/28/22

Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-DIESEL AND OIL	TPH-GASOLINE	BTEX 8260	VOC 8260CL	VOC 8260	SEMIVOC 8270	PAH's 8270	PCB's 8082	CL PESTICIDES 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	ASBESTOS PLM	GRO Suite 830-1	DRO Suite 830-1	WO Suite 830-1	Sulfide + Nitrate					
1. MW-1		1145	W																			X					
2. MW-2		1205																				X					
3. MW-3		1225																				X					
4. MW-4		1245																				X					
5. MW-5		1310	↓																			X					
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18.																											

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	9/28/22 1505		9/29/22
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501

Phone: 360-459-4670
Fax: 360-459-3432

Website: www.esnnw.com
E-Mail: lab@esnnw.com

ESN ANALYTICAL
Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

December 15, 2022

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Alex,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples were analyzed for Gas/BTEX by EPA Method NWTPH-Gx and 8260D, Nitrate by EPA Method 300.0, and Sulfate by EPA Method 300.0 on December 13, 2022- December 14, 2022.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

Applied Analytical Services, NW appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@aasnw.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

CONTENTS

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

SAMPLE INFORMATION

SAMPLE ID	AASNW Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S221212.1	12/12/2022	1105	W	Nitrate, Sulfate
MW-2	S221212.1	12/12/2022	1130	W	Nitrate, Sulfate
MW-3	S221212.1	12/12/2022	1155	W	Nitrate, Sulfate
MW-4	S221212.1	12/12/2022	1220	W	Nitrate, Sulfate
MW-5	S221212.1	12/12/2022	1250	W	Gas/BTEX, Nitrate, Sulfate

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

ANALYTICAL RESULT

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260D

Sample Number	Date Collected	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate (ug/L)
Method Blank		12/14/2022	nd	nd	nd	nd	nd	131
LCS		12/14/2022	99%	91%	99%	110%	82%	114
LCSdup		12/14/2022	89%	89%	97%	94%	–	88
MW-5	12/12/2022	12/14/2022	nd	nd	nd	nd	nd	118
MW-5dup	12/12/2022	12/14/2022	nd	nd	nd	nd	nd	128
Reporting Limits			1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%
Analyst: DGA

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
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Web: www.aasnw.com

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

APPLIED ANALYTICAL SERVICES NW
621 STRANDER BLVD
TUKWILA, WA 98188
Attention: DELY AGOY
Project Name: SUBARU LONGVIEW
Project #: S221021.1
All results reported on an as received basis.

Date Received: 12/12/22
Date Reported: 12/14/22

AMTEST Identification Number **22-A021344**
Client Identification **MW-1**
Sampling Date **12/12/22, 11:05**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	49.2	mg/l		1	EPA 300.0	AY	12/13/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.278	mg/l		0.25	EPA 300.0	AY	12/13/22

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

APPLIED ANALYTICAL SERVICES NW
Project Name: SUBARU LONGVIEW
AmTest ID: 22-A021345

AMTEST Identification Number **22-A021345**
Client Identification **MW-2**
Sampling Date **12/12/22, 11:30**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	202.	mg/l		5	EPA 300.0	AY	12/13/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.537	mg/l		0.25	EPA 300.0	AY	12/13/22

AMTEST Identification Number **22-A021346**
Client Identification **MW-3**
Sampling Date **12/12/22, 11:55**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	96.5	mg/l		5	EPA 300.0	AY	12/13/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.259	mg/l		0.25	EPA 300.0	AY	12/13/22

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

APPLIED ANALYTICAL SERVICES NW
Project Name: SUBARU LONGVIEW
AmTest ID: 22-A021347

AMTEST Identification Number **22-A021347**
Client Identification **MW-4**
Sampling Date **12/12/22, 12:20**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	1.39	mg/l		1	EPA 300.0	AY	12/13/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.344	mg/l		0.25	EPA 300.0	AY	12/13/22

AMTEST Identification Number **22-A021348**
Client Identification **MW-5**
Sampling Date **12/12/22, 12:50**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	80.5	mg/l		1	EPA 300.0	AY	12/13/22

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	< 0.25	mg/l		0.25	EPA 300.0	AY	12/13/22

Aaron W. Young
Vice President

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 22-A021344 to 22-A021348

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
22-A021307	Sulfate	mg/l	< 1	< 1	

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
22-A021307	Sulfate	mg/l	< 1	19.7	20.0	98.50 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	2.00	1.93	96.5 %
Nitrate	mg/l	2.00	2.02	101. %
Sulfate	mg/l	2.00	1.95	97.5 %
Sulfate	mg/l	2.00	2.01	100. %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.025
Nitrate	mg/l	< 0.025
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

APPLIED ANAYTICAL SERVICES,NW

CHAIN-OF-CUSTODY

AASNW PROJECT #

CLIENT: Subaru Longview (BSE)

ADDRESS:

PHONE: EMAIL:

CLIENT PROJECT #: PROJECT MANAGER: Alex Hoch

DATE: 12/12/22 PAGE 1 OF 1

PROJECT NAME: Subaru Longview

LOCATION: Longview

COLLECTOR: H. CARTER DATE OF COLLECTION: 12/12/22

ANALYSES

	Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-Diesel & Oil	TPH-Gasoline	BTEX	VOC 8260C	VOC 8260	SemiVol 8270	PAH 8270	PCB 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	GRO Suite	DRO Suite	Waste Oil Suite	Nitrate + Sulfate		NOTES	Total Numbe of Containers	Laboratory Note Number
1	MW-1		1105	GW																X					
2	MW-2		1130																	X					
3	MW-3		1155																	X					
4	MW-4		1220																	X					
5	MW-5		1200	↓				XX												X					
6																									
7																									
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18																									
19																									
20																									

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	12/12/22 15:30		12/12/22 15:30
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT		LABORATORY NOTES:
TOTAL NUMBER OF CONTAINERS		
CHAIN OF CUSTODY SEALS Y/N/NA		
SEALS INTACT? Y/N/NA		
RECEIVED GOOD COND./COLD		Turn Around Time:
NOTES:		24Hr 48Hr 5D

621 STRANDER BLVD, TUKWILA, WA 98188| PHONE: 425-207-8345 | EMAIL: lab@aasnw.com

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Email: lab@aasnw.com
Web: www.aasnw.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

March 23, 2023

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Mr. Koch,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples were analyzed for Nitrate by EPA Method 300.0, and Sulfate by EPA Method 300.0 on March 21, 2023.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

Applied Analytical Services, NW appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@aasnw.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Water

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

CONTENTS

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

SAMPLE INFORMATION

SAMPLE ID	AASNW Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S230320.1	03/20/2023	1450	W	Nitrate, Sulfate
MW-2	S230320.1	03/20/2023	1515	W	Nitrate, Sulfate
MW-3	S230320.1	03/20/2023	1545	W	Nitrate, Sulfate
MW-4	S230320.1	03/20/2023	1605	W	Nitrate, Sulfate
MW-5	S230320.1	03/20/2023	1630	W	Nitrate, Sulfate

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

ANALYTICAL RESULT

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

APPLIED ANALYTICAL SERVICES,NW
621 STRANDER BLVD
TUKWILA, WA 98188
Attention: DELY GRACE AGOY
Project Name: SUBARU LONGVIEW
All results reported on an as received basis.

Date Received: 03/21/23
Date Reported: 3/22/23

AMTEST Identification Number **23-A005221**
Client Identification **MW-1**
Sampling Date **03/20/23, 14:50**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	63.4	mg/l	D	1	EPA 300.0	AY	03/21/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	1.12	mg/l		0.025	EPA 300.0	AY	03/21/23

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

APPLIED ANALYTICAL SERVICES,NW
Project Name: SUBARU LONGVIEW
AmTest ID: 23-A005222

AMTEST Identification Number **23-A005222**
Client Identification **MW-2**
Sampling Date **03/20/23, 15:15**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	264.	mg/l	D	3	EPA 300.0	AY	03/21/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.188	mg/l		0.025	EPA 300.0	AY	03/21/23

AMTEST Identification Number **23-A005223**
Client Identification **MW-3**
Sampling Date **03/20/23, 15:45**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	98.8	mg/l	D	2	EPA 300.0	AY	03/21/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.259	mg/l		0.025	EPA 300.0	AY	03/21/23

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

APPLIED ANALYTICAL SERVICES,NW
Project Name: SUBARU LONGVIEW
AmTest ID: 23-A005224

AMTEST Identification Number **23-A005224**
Client Identification **MW-4**
Sampling Date **03/20/23, 16:05**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	1.49	mg/l		0.1	EPA 300.0	AY	03/21/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.384	mg/l		0.025	EPA 300.0	AY	03/21/23

AMTEST Identification Number **23-A005225**
Client Identification **MW-5**
Sampling Date **03/20/23, 16:30**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	95.8	mg/l	D	1	EPA 300.0	AY	03/21/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.026	mg/l		0.025	EPA 300.0	AY	03/21/23

D = The reported value is from a dilution.

Aaron W. Young
Vice President

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 23-A005221 to 23-A005225

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
23-A005216	Nitrate	mg/l	3.18	3.18	0.00
23-A005276	Nitrate	mg/l	< 0.025	< 0.025	
23-A005281	Nitrate	mg/l	1.02	1.02	0.00

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
23-A005216	Nitrate	mg/l	3.18	5.12	2.00	97.00 %
23-A005276	Nitrate	mg/l	< 0.025	1.80	2.00	90.00 %
23-A005281	Nitrate	mg/l	1.02	2.87	2.00	92.50 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	2.00	1.89	94.5 %
Nitrate	mg/l	2.00	1.86	93.0 %
Nitrate	mg/l	2.00	1.87	93.5 %
Sulfate	mg/l	2.00	2.00	100. %
Sulfate	mg/l	2.00	1.96	98.0 %
Sulfate	mg/l	2.00	1.96	98.0 %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.025
Nitrate	mg/l	< 0.025
Nitrate	mg/l	< 0.025
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

APPLIED ANAYTICAL SERVICES,NW

CHAIN-OF-CUSTODY

AASNW PROJECT #

CLIENT: Clary Longview Subaru (BSE)

ADDRESS:

PHONE: EMAIL:

CLIENT PROJECT #: PROJECT MANAGER: Alex Koch

DATE: 3/20/23 PAGE 1 OF 1

PROJECT NAME: Subaru Longview

LOCATION: Longview

COLLECTOR: H. CARTER DATE OF COLLECTION: 3/20/23

	Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-Diesel & Oil	TPH-Gasoline	BTEX	VOC 8260CL	VOC 8260	Semivol 8270	PAH 8270	PCB 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	GRO Suite	DRO Suite	Waste Oil Suite	Nitrate & Sulfate			NOTES	Total Numbe of Containers	Laboratory Note Number
1	MW-1		1450	W																X						
2	MW-2		1515																	X						
3	MW-3		1545																	X	X					
4	MW-4		1605																	X						
5	MW-5		1630	↓																X						
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RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	3/20/23 1720		3/21/23 0735
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24Hr 48Hr (5D)

621 STRANDER BLVD, TUKWILA, WA 98188| PHONE: 425-207-8345 | EMAIL: lab@aasnw.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.207.8345
Email: lab@aasnw.com
Web: www.aasnw.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
Email: lab@aasnw.com
Web: www.aasnw.com

June 30, 2023

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Mr. Koch,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Five water samples were analyzed for EDB by EPA Method 8011, Nitrate by EPA Method 300.0 and Sulfate by EPA Method 300.0 on June 23, 2023- June 29, 2023.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

Applied Analytical Services, NW appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-410-3046.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-410-3046
delygrace.agoy@aasnw.com

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
Email: lab@aasnw.com
Web: www.aasnw.com

ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: H. Carter

Sample Matrix: Water

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
Email: lab@aasnw.com
Web: www.aasnw.com

CONTENTS

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
Email: lab@aasnw.com
Web: www.aasnw.com

SAMPLE INFORMATION

SAMPLE ID	AASNW #	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
MW-1	S230622.1	06/22/2023	1055	W	Nitrate, Sulfate, EDB
MW-2	S230622.1	06/22/2023	1120	W	Nitrate, Sulfate, EDB
MW-3	S230622.1	06/22/2023	1145	W	Nitrate, Sulfate, EDB
MW-4	S230622.1	06/22/2023	1210	W	Nitrate, Sulfate, EDB
MW-5	S230622.1	06/22/2023	1240	W	Nitrate, Sulfate, EDB

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
Email: lab@aasnw.com
Web: www.aasnw.com

ANALYTICAL RESULT

ACCU LABORATORY

12524 130th Lane NE
Kirkland WA 98034

Tel: (425) 214-5858
(425) 214-5868
Email: lisa@accu-lab.com
website: www.accu-lab.com

Analytical Report

Client	**Applied Analytical Services, NW**	**Acculab WO#**	**23-AL0622-12**
	621 Strander BLVD		
	Tukwila, WA 98188	Date Sampled	6/22/2023
Project Manager	Dely Grace Agoy	Date Received	6/22/2023
Project Name	**Subaru Longview**	Date Reported	6/27/2023
Project#	**S230622.1**		

1,2-Dibromoethane (EDB) in Water by EPA 8011

Accu Lab Batch# AL062323-5

Client sample ID					**MW-1**	**MW-2**	**MW-3**
Lab ID	**MRL**	**Unit**	**MTH BLK**	**LCS**	23-AL0622-12-1	23-AL0622-12-2	23-AL0622-12-3
Matrix			Water	Water	Water	Water	Water
Date Extracted			6/23/2023	6/23/2023	6/23/2023	6/23/2023	6/23/2023
Date Analyzed			6/27/2023	6/27/2023	6/27/2023	6/27/2023	6/27/2023
1,2-Dibromoethane (EDB)	0.01	ug/l	nd	110%	nd	nd	nd

Acceptable Recovery Limits:
LCS/ MS/MSD *60-140%*
Acceptable RPD limit: *30%*

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Email: lab@aasnw.com
Web: www.aasnw.com

CCU LABORATORY

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Kirkland WA 98034

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(425) 214-5868
Email: lisa@accu-lab.com
website: www.accu-lab.com

Analytical Report

Client	**Applied Analytical Services, NW**	**Acculab WO#**	**23-AL0622-12**
	621 Strander BLVD		
	Tukwila, WA 98188	Date Sampled	6/22/2023
Project Manager	Dely Grace Agoy	Date Received	6/22/2023
Project Name	**Subaru Longview**	Date Reported	6/27/2023
Project#	**S230622.1**		

1,2-Dibromoethane (EDB) in Water by EPA 8011

Accu Lab Batch# AL062323-5

Client sample ID			**MW-4**	**MW-5**
Lab ID	**MRL**	**Unit**	23-AL0622-12-4	23-AL0622-12-5
Matrix			Water	Water
Date Extracted			6/23/2023	6/23/2023
Date Analyzed			6/27/2023	6/27/2023
1,2-Dibromoethane (EDB)	0.01	ug/l	nd	nd

Acceptable Recovery Limits:
LCS/ MS/MSD *60-140%*
Acceptable RPD limit: *30%*

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Email: lab@aasnw.com
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website: www.accu-lab.com

Analytical Report

Client	**Applied Analytical Services, NW**	**Acculab WO#**	**23-AL0622-12**
	621 Strander BLVD		
	Tukwila, WA 98188	Date Sampled	6/22/2023
Project Manager	Dely Grace Agoy	Date Received	6/22/2023
Project Name	**Subaru Longview**	Date Reported	6/27/2023
Project #	**S230622.1**		

Data Qualifiers and Comments:

MRL- Method Reporting Limit
nd- Indicates the analyte is not detected at the listing reporting limit.
C- Coelution with other compounds.
M- % Recovery of surrogate, MS/MSD is out of the acceptable limit due to matrix effect.
B- Indicates the analyte is detected in the method blank associated with the sample.
J- The analyte is detected at below the reporting limit.
E- The result reported exceeds the calibration range, and is an estimate.
D- Sample required dilution due to matrix. Method Reporting Limits were elevated due to dilutions.
H- Sample was received or analyzed past holding time
Q- Sample was received with head space, improper preserved or above recommended temperature.
I- Due to insufficient sample, LCS/LCS DUP were analyzed in place of MS/MSD.
R- The recovery of this analyte in QC sample failed high, but the analyte was not detected in all related samples. No action was taken.
R-1- The RPD value for the MS/MSD was outside of QC acceptance limits however both recoveries were acceptable. All related samples were "nd". No action was taken.
R-2- The recovery of the surogate in sample failed high, but all related analytes were not detected in the sample. No action was taken.

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
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Web: www.aasnw.com

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

APPLIED ANALYTICAL SERVICES NW
621 STRANDER BLVD
TUKWILA, WA 98188
Attention: DELY AGOY
Project #: S230622.1
All results reported on an as received basis.

Date Received: 06/22/23
Date Reported: 6/30/23

AMTEST Identification Number **23-A010783**
Client Identification **MW-1**
Sampling Date **, 10:35**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	37.3	mg/l	D	0.5	EPA 300.0	AY	06/26/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.885	mg/l		0.025	EPA 300.0	AY	06/23/23

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
Email: lab@aasnw.com
Web: www.aasnw.com

APPLIED ANALYTICAL SERVICES NW
Project Name:
AmTest ID: 23-A010784

AMTEST Identification Number **23-A010784**
Client Identification **MW-2**
Sampling Date **, 11:20**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	242.	mg/l	D	5	EPA 300.0	AY	06/26/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.219	mg/l		0.025	EPA 300.0	AY	06/23/23

AMTEST Identification Number **23-A010785**
Client Identification **MW-3**
Sampling Date **, 11:45**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	129.	mg/l	D	3	EPA 300.0	AY	06/29/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.128	mg/l		0.025	EPA 300.0	AY	06/26/23

Office: 621 Strander Blvd., Tukwila, WA 98188 | Office Number: 425.410.3046
Email: lab@aasnw.com
Web: www.aasnw.com

APPLIED ANALYTICAL SERVICES NW
Project Name:
AmTest ID: 23-A010786

AMTEST Identification Number **23-A010786**
Client Identification **MW-4**
Sampling Date **, 12:10**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	2.57	mg/l		0.1	EPA 300.0	AY	06/26/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.836	mg/l		0.025	EPA 300.0	AY	06/26/23

AMTEST Identification Number **23-A010787**
Client Identification **MW-5**
Sampling Date **, 12:40**

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Sulfate	75.4	mg/l	D	2	EPA 300.0	AY	06/29/23

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrate	0.078	mg/l		0.025	EPA 300.0	AY	06/26/23

D = The reported value is from a dilution.

Aaron Young
Vice President

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www.amtestlab.com

AMTEST LABORATORIES

Analytical Services

QC Summary for sample numbers: 23-A010783 to 23-A010787

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
23-A010728	Nitrate	mg/l	0.102	0.111	8.5
23-A010838	Nitrate	mg/l	0.165	0.173	4.7
23-A010826	Nitrate	mg/l	0.218	0.216	0.92
23-A010838	Sulfate	mg/l	3.97	4.13	4.0
23-A010826	Sulfate	mg/l	1.26	1.26	0.00

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
23-A010728	Nitrate	mg/l	0.102	2.17	2.00	103.40 %
23-A010838	Nitrate	mg/l	0.165	2.18	2.00	100.75 %
23-A010826	Nitrate	mg/l	0.218	2.09	2.00	93.60 %
23-A010838	Sulfate	mg/l	3.97	6.13	2.00	108.00 %
23-A010826	Sulfate	mg/l	1.26	3.12	2.00	93.00 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Nitrate	mg/l	2.00	2.14	107. %
Nitrate	mg/l	2.00	2.01	100. %
Sulfate	mg/l	2.00	1.99	99.5 %
Sulfate	mg/l	2.00	1.82	91.0 %
Sulfate	mg/l	2.00	1.86	93.0 %
Sulfate	mg/l	2.00	1.88	94.0 %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.025
Nitrate	mg/l	< 0.025
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

APPLIED ANAYTICAL SERVICES,NW

CHAIN-OF-CUSTODY

AASNW PROJECT # S230623-1

CLIENT: Subaru Longview

ADDRESS:

PHONE: EMAIL:

CLIENT PROJECT #: PROJECT MANAGER: Alex Koch

DATE: 6/22/23 PAGE 1 OF 1

PROJECT NAME: Subaru Longview

LOCATION: Longview

COLLECTOR: H.CARTER DATE OF COLLECTION: 6/22/23

ANALYSES

	Sample Number	Depth	Time	Sample Type	Container Type	TPH-HCID	TPH-Diesel & Oil	TPH-Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH 8270	PCB 8082	Cl. Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	GRO Suite	DRO Suite	Waste Oil Suite	EDB	Nitrate	Sulfate	NOTES	Total Numbe of Containers	Laboratory Note Number
1	MW-1		1055	W																	X					
2	MW-2		1120																		X					
3	MW-3		1145																		X					
4	MW-4		1210																		X					
5	MW-5		1240																		X					
6																										
7																										
8																										
9																										
10																										
11																										
12																										
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17																										
18																										
19																										
20																										

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
	6/22/23 1506		6/22/23 1506
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24Hr 48Hr (5D)

621 STRANDER BLVD, TUKWILA, WA 98188| PHONE: 425-207-8345 | EMAIL: lab@aasnw.com

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Email: lab@aasnw.com
Web: www.aasnw.com

APPENDIX G

Soil Gas Analytical Laboratory Reports

Bud Clary Subaru
961 Commerce Avenue
Longview, Washington 98632

3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

April 28, 2021

Mr. Alex Koch
Blue Sage Environmental
198007 East 30th Ave,
Kennewick WA 99337

Dear Alex,

Please find enclosed analytical data report for PROJECT: **Subaru Longview** located in Longview, WA. Two soil vapor samples were analyzed for TO-15 BTEX and APH on April 21, 2021.

The results of the analyses are summarized and included on this report. Applicable detection limits and QA/QC data are included.

ESN Analytical appreciates the opportunity to have provided services for this project. If you have any further questions about the data report, please give us a call at 425-207-8345.

Thank you so much and it was a pleasure working with your company on this project. We are looking forward to the next opportunity to work together.

Sincerely,

Dely Grace Agoy
Senior Chemist
425-207-8345
delygrace.agoy@esnanalytical.com

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ANALYTICAL DATA REPORT

Project: Subaru Longview

Location: Longview, WA

Submitted to: **BLUE SAGE ENVIRONMENTAL**

Project Manager: Alex Koch

Sample Collector: Haley Carter

Sample Matrix: Soil Vapor

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CONTENTS

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SAMPLE INFORMATION

SAMPLE ID	ESN Analytical Project Number	SAMPLING DATE	SAMPLING TIME	Matrix	Analysis
SV-1	S210420.R1	04/20/21	Initial Time 1015 Final Time 1035	SV	TO-15 BTEX, APH
SV-2	S210420.R1	04/20/21	Initial Time 1040 Final Time 1050	SV	TO-15 BTEX, APH

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TEST RESULTS

Sampling date: April 20, 2021

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 21, 2021 by Friedman & Bruya, Inc. from the ESN NW Bud Clary Subaru, F&BI 104370 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	ESN NW
104370 -01	SV-1
104370 -02	SV-2

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

All quality control requirements were acceptable.

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SV-1	Client:	ESN NW
Date Received:	04/21/21	Project:	Bud Clary Subaru, F&BI 104370
Date Collected:	04/20/21	Lab ID:	104370-01 1/4.8
Date Analyzed:	04/21/21	Data File:	042121.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	460
APH EC9-12 aliphatics	190
APH EC9-10 aromatics	<120

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SV-2	Client:	ESN NW
Date Received:	04/21/21	Project:	Bud Clary Subaru, F&BI 104370
Date Collected:	04/20/21	Lab ID:	104370-02 1/5.4
Date Analyzed:	04/21/21	Data File:	042123.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	550
APH EC9-12 aliphatics	200
APH EC9-10 aromatics	<130

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	ESN NW
Date Received:	Not Applicable	Project:	Bud Clary Subaru, F&BI 104370
Date Collected:	Not Applicable	Lab ID:	01-823 MB
Date Analyzed:	04/21/21	Data File:	042116.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SV-1	Client:	ESN NW
Date Received:	04/21/21	Project:	Bud Clary Subaru, F&BI 104370
Date Collected:	04/20/21	Lab ID:	104370-01 1/4.8
Date Analyzed:	04/21/21	Data File:	042121.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.5	<0.48
Toluene	<90	<24
Ethylbenzene	<2.1	<0.48
m,p-Xylene	<4.2	<0.96
o-Xylene	<2.1	<0.48
Naphthalene	1.5	0.28

Client Sample ID:	SV-2	Client:	ESN NW
Date Received:	04/21/21	Project:	Bud Clary Subaru, F&BI 104370
Date Collected:	04/20/21	Lab ID:	104370-02 1/5.4
Date Analyzed:	04/21/21	Data File:	042123.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.7	<0.54
Toluene	<100	<27
Ethylbenzene	<2.3	<0.54
m,p-Xylene	<4.7	<1.1
o-Xylene	<2.3	<0.54
Naphthalene	<1.4	<0.27

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	ESN NW
Date Received:	Not Applicable	Project:	Bud Clary Subaru, F&BI 104370
Date Collected:	Not Applicable	Lab ID:	01-823 MB
Date Analyzed:	04/21/21	Data File:	042116.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.26	<0.05

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/27/21
Date Received: 04/21/21
Project: Bud Clary Subaru, F&BI 104370

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 104370-01 1/4.8 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	460	500	8
APH EC9-12 aliphatics	ug/m3	190	200	5
APH EC9-10 aromatics	ug/m3	<120	<120	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	99	70-130
APH EC9-12 aliphatics	ug/m3	67	122	70-130
APH EC9-10 aromatics	ug/m3	67	104	70-130

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/27/21
Date Received: 04/21/21
Project: Bud Clary Subaru, F&BI 104370

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 104370-01 1/4.8 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Benzene	ug/m3	<1.5	<1.5	nm
Toluene	ug/m3	<90	<90	nm
Ethylbenzene	ug/m3	<2.1	<2.1	nm
m,p-Xylene	ug/m3	<4.2	<4.2	nm
o-Xylene	ug/m3	<2.1	<2.1	nm
Naphthalene	ug/m3	1.5	1.5	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	96	70-130
Toluene	ug/m3	51	102	70-130
Ethylbenzene	ug/m3	59	93	70-130
m,p-Xylene	ug/m3	120	97	70-130
o-Xylene	ug/m3	59	101	70-130
Naphthalene	ug/m3	71	101	70-130

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Web: www.esnanalytical.com

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

3155 NE Sunset Blvd, Suite A
Renton, WA 98056
Phone: 425.207.8345
Email: lab@esnanalytical.com
Web: www.esnanalytical.com

Sent to Heather & Bruya.

SAMPLE CHAIN OF CUSTODY

Report To BUD CLARY SUBARU (BSE)
Company
Address LONGVIEW
City, State, ZIP
Phone Email ALEX KOCH

SAMPLERS (signature)	
PROJECT NAME & ADDRESS BUD CLARY SUBARU	PO #
NOTES:	INVOICE TO

Page # _____ of _____

TURNAROUND TIME
☑ Standard
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Default: Clean after 3 days
☐ Archive (Fee may apply)

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium		Notes
SV-1		8536	258	IA / SG	4/20/21	28	1015	0	1035		X		X			
SV-2		8207	280	IA / SG	4/20/21	28	1040	2	1050		X		X			
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												
				IA / SG												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	HALEY CARTER	BSE	4/21/21	1040
Received by:	Delyana Angy			
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

ESN ANALYTICAL

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 28, 2021

Dely Grace Agoy, Project Manager
ESN Analytical
3155 NE Sunset Blvd, Suite A
Renton, WA 98056

Dear Ms Agoy:

Included are the results from the testing of material submitted on June 18, 2021 from the Subaru Longview, F&BI 106323 project. There are 10 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Alex Koch
ESN0628R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 18, 2020 by Friedman & Bruya, Inc. from the ESN Analytical Subaru Longview project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	ESN Analytical
106323 -01	SV-2
106323 -02	SV-1

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SV-2	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-01 1/5.3
Date Analyzed:	06/21/21	Data File:	062127.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<400
APH EC9-12 aliphatics	220
APH EC9-10 aromatics	<130

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	SV-1	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-02 1/4.9
Date Analyzed:	06/21/21	Data File:	062128.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<370
APH EC9-12 aliphatics	160
APH EC9-10 aromatics	<120

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	ESN Analytical
Date Received:	Not Applicable	Project:	Subaru Longview, F&BI 106323
Date Collected:	Not Applicable	Lab ID:	01-1226 MB
Date Analyzed:	06/21/21	Data File:	062121.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SV-2	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-01 1/5.3
Date Analyzed:	06/21/21	Data File:	062127.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.7	<0.53
Toluene	<100	<26
Ethylbenzene	3.5	0.81
m,p-Xylene	16	3.7
o-Xylene	5.9	1.4
Naphthalene	<1.4	<0.26

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	SV-1	Client:	ESN Analytical
Date Received:	06/18/21	Project:	Subaru Longview, F&BI 106323
Date Collected:	06/17/21	Lab ID:	106323-02 1/4.9
Date Analyzed:	06/21/21	Data File:	062128.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<1.6	<0.49
Toluene	<92	<24
Ethylbenzene	<2.1	<0.49
m,p-Xylene	7.9	1.8
o-Xylene	2.9	0.67
Naphthalene	<1.3	<0.24

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	ESN Analytical
Date Received:	Not Applicable	Project:	Subaru Longview, F&BI 106323
Date Collected:	Not Applicable	Lab ID:	01-1226 MB
Date Analyzed:	06/21/21	Data File:	062121.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.26	<0.05

Date of Report: 06/28/21
Date Received: 06/18/21
Project: Subaru Longview, F&BI 106323

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 106322-01 1/5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	<370	<370	nm
APH EC9-12 aliphatics	ug/m3	<120	<120	nm
APH EC9-10 aromatics	ug/m3	<120	<120	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	84	70-130
APH EC9-12 aliphatics	ug/m3	67	103	70-130
APH EC9-10 aromatics	ug/m3	67	95	70-130

Date of Report: 06/28/21
Date Received: 06/18/21
Project: Subaru Longview, F&BI 106323

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 106322-01 1/5 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Benzene	ug/m3	<1.6	<1.6	nm
Toluene	ug/m3	<94	<94	nm
Ethylbenzene	ug/m3	<2.2	<2.2	nm
m,p-Xylene	ug/m3	<4.3	<4.3	nm
o-Xylene	ug/m3	<2.2	<2.2	nm
Naphthalene	ug/m3	<1.3	<1.3	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	80	70-130
Toluene	ug/m3	51	83	70-130
Ethylbenzene	ug/m3	59	74	70-130
m,p-Xylene	ug/m3	120	79	70-130
o-Xylene	ug/m3	59	81	70-130
Naphthalene	ug/m3	71	86	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

106323

SAMPLE CHAIN OF CUSTODY

ME 06/18/21

Report To Subaru Longview (BSE)

Company BSE Report TO

Address ESN

City, State, ZIP

Phone Email shoch19672@gmail.com

SAMPLERS (signature)

PROJECT NAME & ADDRESS: Subaru Longview

PO #

NOTES:

INVOICE TO: Subaru Longview

Page # 1 of 1

TURNAROUND TIME
- ☑ Standard
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☒ Default: Clean after 3 days
- ☐ Archive (Fee may apply)

SAMPLE INFORMATION / ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	Notes
SV-2	01	8232	220	IA / (SG)	6/17/21	-30	1050	-3	1100		X	X			
SV-1	02	8210	228	IA / (SG)	6/17/21	-28	1100	0	1110		X	X			
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											
				IA / SG											

Samples received at 22 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	HALEY CARTER	BSE	6/18/21	940
Received by:	Loan Thai	ESN	6/18/21	9:45am
Relinquished by:				
Received by:	Nhan Phan	FEBT	6/18/21	1320

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044