Aspect
A Geosyntec Company

November 10, 2023

Beth Kercher
Department of Ecology, Eastern Regional Office
4601 N Monroe Street,
Spokane, WA 99205

Re: Work Plan for Additional Subject Property Investigation - DRAFT
Wine Country Store, 7 East Rose Street, Walla Walla, WA
Project No. 220442-A

Dear Beth:

Aspect Consulting (Aspect) has prepared this Work Plan on behalf of Stillwater Holdings, LLC to present the scope of work for completing additional investigation of their property located at 7 East Rose Street in Walla Walla, Washington (Subject Property), which operates as a Chevron-branded fuel station. A subsurface release of gasoline was identified in the vicinity of the Subject Property in September 2023. The Washington State Department of Ecology (Ecology) provided spill response actions to mitigate immediate hazards and evaluate the source of the gasoline, which was initially discovered in basement sumps of two nearby buildings. Based on the results of their evaluations, Ecology issued a letter to Stillwater Holdings, LLC, dated October 3, 2023, asking for immediate action to address the gasoline release. Initial investigation of the Subject Property included drilling for the evaluation of subsurface conditions, collection of soil samples for laboratory analysis, installation of groundwater monitoring wells, and gauging the monitoring wells for the presence of gasoline as light nonaqueous phase liquid (LNAPL). Additional investigation will be conducted on the Subject Property to further evaluate the suspected release from the underground storage tank (UST) system on the Subject Property

The objective of the additional investigation on the Subject Property described herein is to 1) identify if a release occurred from the UST system; and 2) collect data to further characterize the nature and extent of hazardous substances in soil and groundwater at concentrations exceeding applicable cleanup levels on the Subject Property. The work will be conducted in general accordance with the Model Toxics Control Act (MTCA) cleanup regulation, Chapter 173-340 of the Washington Administrative Code (WAC) and the UST Regulations, Chapter 173-360A WAC.

Project History

The Subject Property comprises 0.23 acres of commercial land located in downtown Walla Walla in Walla Walla County, Washington that is developed and operated as a fuel station with a convenience store. The fuel station has three 10,000-gallon capacity, fiberglass USTs that were installed on November 15, 1981, and two fuel dispenser islands (ALLWEST, 2022[1]). The USTs consist of two used for storage and distribution of gasoline and one for diesel. Historical records available from Ecology document a previous soil and groundwater cleanup at the Subject Property,

[1] ALLWEST, 2022, Phase I Environmental Site Assessment, Bill Singer's Chevron, 7 East Rose Street, Walla Walla, Washington, 99362, October 7, 2022.

identified at the time as Bill Singer's Chevron or Singer's Chevron, conducted between 2010 and 2013. In May 2013, Ecology issued a No Further Action determination for gasoline-range petroleum hydrocarbons in soil and groundwater with an Environmental Covenant that required maintenance of a surface cap over contaminated soil (Ecology, 2013[2]).

On September 14, 2023, petroleum-like odors were observed in the basement of the Marcus Whitman Hotel, located at 6 West Rose Street, across North 2nd Avenue from the Subject Property. Testing of air quality within the basement of the hotel identified elevated concentrations of volatile organic compounds (VOCs) and combustible gas concentrations at 93% of the Lower Explosive Limit (LEL) (Ecology, 2023[3]). Further investigation identified gasoline in two sumps and a vault in the hotel and in a sump in a vacant building located at 106 North 2nd Avenue, adjoining the Subject Property (106 Building). Elevated concentrations of VOCs and combustible gases were also measured in the 106 Building and in the U.S. Post Office building located on the north side of the 106 Building at 128 North 2nd Avenue (Ecology, 2023). Emergency response actions were implemented and included building ventilation and gasoline product recovery from building sumps.

Ecology investigated the source of the release through the collection and forensic analysis of product samples and advancement of exploratory soil borings (Ecology, 2023). The results of Ecology's investigation resulted in the October 3, 2023 letter, *Technical assistance regarding gasoline release from 7 E. Rose Street, Walla Walla*, to Wine Country Store, LLC c/o Ben Kleban from Sam Hunn, Regional Supervisor, Ecology Eastern Regional Office Spill Prevention, Preparedness, and Response Program, alleging that the source of the gasoline is the Subject Property and requesting that further investigation be completed to assess the full extent of contamination.

Previous Investigations

Aspect completed an initial subsurface investigation on the Subject Property in October and November 2023. The initial investigation consisted of installation and development of four groundwater monitoring wells (AMW-01 through AMW-04) and gauging of the wells for the presence of LNAPL and the depth to groundwater. The monitoring wells were gauged for the presence and thickness of LNAPL and the depth to groundwater following installation in late October and again in early November. The location of the wells is shown on Figure 1. The boring/well construction logs are provided as Appendix A.

One soil sample collected from each boring at the apparent top of the water table, as observed at the time of drilling, was submitted for laboratory analysis of gasoline-range petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes (BTEX). The laboratory analytical results are provided in Table 1 and the analytical report is provided in Appendix B. Gasoline-range petroleum hydrocarbons and two or more of the BTEX compounds were detected above MTCA Method A cleanup levels for unrestricted land use in soil samples collected at boring AMW-01 (located north of the dispensers beneath the western fuel island canopy), boring AMW-02 (located directly west of the existing tanks), and boring AMW-04 (located north of the tanks). Benzene was the only

[2] Environmental Covenant for Tax Parcel 360720574707 executed on May 13, 2013 between Bill D. & Loretta R. Singer and State of Washington, Department of Ecology.
[3] Washington State Department of Ecology, 2023, Incident Briefing ICS 201-CG, Marcus Whitman Hotel Hazmat Response 091423, October 2, 2023.

analyzed contaminant detected above the MTCA Method A cleanup level in the soil sample collected from boring AMW-03, located at the southwest corner of the Subject Property.

Monitoring on the Subject Property (AMW-01 through AMW-04) and accessible off-Property wells (MW-5 through MW-9) were gauged for LNAPL and the depth to groundwater on October 18 and 19, 2023, and November 8, 2023. No measurable product was identified in the wells on the Subject Property (AMW-01 through AMW-04) or in off-property wells MW-7 through MW-9 (Table 2). LNAPL was measured in well MW-6 at thicknesses of 0.19 and 0.18 feet (Table 2). Groundwater levels measured at each well indicate localized groundwater flows to the southwest on the Subject Property and to the northwest in the Subject Property vicinity.

Groundwater sampling of monitoring wells AMW-01 through AMW-04 and MW-7 through MW-9 was conducted on November 8 and 9, 2023. MW-1 through MW-4 were not accessible without a right-of-way (ROW) permit, and MW-5 had a hard blockage at approximately 15 feet below top of casing. MW-1 was also noted to have a blockage at approximately 7 feet below top of casing, reportedly due to an incident with a vehicle during groundwater extraction activities conducted as part of initial spill response actions. Once a ROW permit is secured, the remaining undamaged wells will be sampled. Further investigation into the blockages at MW-1 and MW-5 will be conducted in the future.

Scope of Work

The scope of work described in this Work Plan for the Subject Property includes the following:

- Advancement of eight soil borings
- Installation and development of one groundwater monitoring well
- Collection and laboratory analysis of soil samples from the soil borings
- Collection and laboratory analysis of groundwater samples from the new Subject Property well[4]

The work is described in detail in the subsections below.

Locations

Eight borings (AB-01 through AB-07 and AMW-05) will be advanced on the Subject Property at the approximate locations shown on Figure 2. The final locations may be modified in the field at the time of drilling based on access limitations, including the presence of underground or overhead utilities. The boring locations were selected as follows:

- Borings AB-01 through AB-03 will be advanced on two sides of the existing UST pit.
- Borings AB-04 will be advanced along the fuel piping that connects the two fuel dispenser islands.

[4] As described below, groundwater samples will be collected only if 0.1-foot or less of LNAPL is measured on groundwater in a well.

- Borings AB-05 and AMW-05 will be advanced near the fuel dispensers located beneath the eastern fuel island canopy. Boring AMW-05 will be completed as a groundwater monitoring well to evaluate groundwater quality downgradient of the UST pit.
- Borings AB-06 and AB-07 will be advanced near the fuel dispensers located beneath the western fuel island canopy.

The borings will be advanced to a depth of 5 feet below the top of the water table, as observed at the time of drilling, except for well AMW-05, which will be advanced to a depth of 20 feet below ground surface (bgs) for installation of a monitoring well. Groundwater has been measured in existing monitoring wells on the Subject Property at approximate depths of 11 to 15 feet bgs. Based on this information and the depth of contamination encountered during the initial investigation, the maximum total depth of the soil borings will be 20 feet. The monitoring well will be installed with a diameter and screen length appropriate for use as a recovery or extraction well, if determined through analysis to be appropriate as part of a cleanup action.

Drilling Methods, Soil Classification and Field Screening

Prior to drilling, each boring will be vacuum cleared of utilities to a depth of approximately 5 feet bgs. In addition, a public utility locate request will be submitted through the One-Call Utility Notification Center and a private locator will be contracted to clear the boring locations of any subsurface conductible utilities.

Each boring will be drilled using sonic drilling methods. Soil samples will be collected continuously in 5-foot intervals to the total depth of the exploration using a 3- to 4-inch diameter sampling core barrel inside an outer sonic drill casing. A field geologist will visually classify the soils in accordance with the ASTM International (ASTM) *Standard Practice for Description and Identification of Soils* (Visual-Manual Procedure), ASTM Method D2488 (ASTM, 2009[5]). In addition, the field geologist will screen each soil sample using a photoionization detector (PID) to monitor for the presence of VOCs.

A portion of the soil sample will be placed into a resealable plastic bag for headspace vapor screening. Ambient air will be captured in the bag; the bag will be sealed and then shaken gently to expose the soil to the air trapped in the bag. Vapors present within the sample bag's headspace will be measured by inserting the probe of a PID through a small opening in the bag, ensuring that the probe doesn't contact the soil. PID readings will be recorded on the boring logs. The soil descriptions, field screening results, PID readings, and other relevant details (e.g., staining, debris, odors, sheen, etc.) will be recorded on a boring log form.

Soil Sample Collection and Analysis

Soil samples will be collected from 2.5-foot intervals beginning at a depth of 5 feet bgs to the apparent top of the water table, as observed at the time of drilling, and at the bottom of the boring (5 feet below the water table) for potential chemical analytical testing. Up to two soil samples from above the water table in each boring will be submitted for laboratory analysis of gasoline-range petroleum hydrocarbons by NWTPH-Gx and benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021. Soil samples will be selected for chemical analysis from intervals where field

[5] ASTM, 2009, ASTM D2488-09a, Standard Practice for Description and Identification of Soils, ASTM International, West Conshohocken, PA, 2009.

screening results identify odors, staining, sheen, or volatile vapor concentrations above background levels. If field screening results do not suggest the presence of contamination in soil, the sample intervals will be selected based on sample recovery, classified soil type, and the depth at which contamination is most likely to be present (for example, at a depth of 10 feet bgs when evaluating for a potential release from the USTs or a depth of 5 feet bgs when evaluating for a potential release from product piping or fuel dispensers).

Well Construction

Monitoring well AMW-05 will be installed similarly to existing monitoring wells on the Subject Property, to a total depth of 20 feet bgs with 15 feet of screen. The monitoring well will be installed by a state-licensed, resource-protection well driller and in accordance with Chapter 173-160 WAC. An Aspect field geologist will oversee and document installation of each monitoring well, including completion of an As-Built Well Completion Diagram.

Well AMW-05 will be constructed as a 4-inch-diameter, threaded Schedule 40 PVC with 0.020-inch slotted screen and blank casing above. An artificial filter pack consisting of 10/20 silica sand will be placed around the well screen, and a minimum 1.5-foot-thick annular bentonite seal will be placed above the filter pack. A concrete surface seal will be set at grade for each new monitoring well with a flush-mount steel monument. The well casing and monuments will be surveyed by a licensed surveyor into the existing well network to allow for the evaluation of groundwater flow direction and gradient.

Well Development

The monitoring well will be developed to remove fine-grained material from inside the well casing and filter pack, and to improve hydraulic communication between the well screen and the surrounding water-bearing formation. Well development will include a combination of surging across the well screen, pumping, and monitoring of turbidity. Surging will be completed by repeatedly raising and dropping a surge block across the length of the submerged screen to dislodge fine-grained material in the well screen and filter pack. A downhole submersible well-development pump will be used to purge groundwater until turbidity is reduced to minimal levels (below 10 nephelometric turbidity units [NTU] if practicable), or until a minimum of 10 casing volumes of water have been removed from the well.

Groundwater Monitoring and Sampling

No sooner than 48 hours following well development completion of AMW-05, a groundwater sample will be collected for laboratory analysis. Prior to groundwater purging and sampling at well AMW-05, all accessible wells located both on the Subject Property and in the surrounding city ROW will be gauged for the presence of LNAPL and the depth to groundwater. Prior to taking water level measurements, a downhole camera will be used to investigate the blockages in wells MW-1 and MW-5 to determine whether the monitoring wells are suitable for future groundwater monitoring and sampling, or if they need to be decommissioned. A ROW permit will be obtained from the City of Walla Walla to safely access the wells installed by others in the city ROW. The ROW permit will include traffic control plans to access each well. Existing monitoring wells that were not accessible for sampling without the ROW permit will be sampled at the same time as new well AMW-05.

Each accessible and suitable well will be opened and allowed to equilibrate to atmospheric pressure for at least 30 minutes prior to monitoring. The presence and thickness of LNAPL in each well will be gauged using a downhole product probe and the depth to water will be measured to the nearest 0.01-foot using a water level meter. Groundwater purging and sampling will be completed at wells where 0.1-foot or less of LNAPL is measured on groundwater.

Groundwater samples will be collected from the monitoring wells in accordance with the industry standard procedures for low-flow purging and sampling that are outlined in EPAs Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures[6], using a peristaltic pump with dedicated tubing with the tubing intake placed at the midpoint of the screened interval. Field parameters (temperature, pH, specific electrical conductance [conductivity], dissolved oxygen, oxidation-reduction potential [ORP], and turbidity) will be monitored using a YSI meter and flow-through cell, or equivalent, and field turbidimeter and recorded until they stabilize. Stabilization will be determined by three successive readings, taken 3 to 5 minutes apart, with ± 0.1 for pH, ± 3% for conductivity, ±10% for dissolved oxygen, ± 10 millivolts for ORP, and ± 10% for turbidity. At least five successive readings of field parameters will be taken during low-flow purging and recorded at each monitoring well. Once purging is complete, the groundwater samples will be collected using the same low-flow rate directly into laboratory-supplied sample containers.

Groundwater samples collected from the wells will be submitted for laboratory analysis of gasoline-range petroleum hydrocarbons by method NWTPH-Gx and BTEX by EPA Method 8021.

Data Compilation and Evaluation

The results of the additional Subject Property investigation will be summarized in data tables, figures depicting exploration locations and groundwater flow direction, and boring/well construction logs.

Limitations

Work for this project was performed for Stillwater Holdings, LLC (Client), and this letter was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This letter does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

[6] Puls, Robert W., and Barcelona, Michael J., Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures, USEPA Office of Research and Development Ground Water Issue EPA/540/S-95/504, April 1996.

Sincerely,

Aspect consulting

DRAFT

Delia Massey, PE
Project Engineer
dmassey@aspectconsulting.com

DRAFT

Carla Brock, LHG
Principal Geologist
cbrock@aspectconsulting.com

Attachments:
Table 1 – Soil Results
Table 2 – Groundwater Elevations and Product Measurements
Figure 1 – Site Map Showing Investigation Locations
Figure 2 – Proposed Investigation Locations on Chevron Property
Appendix A – Monitoring Well Logs
Appendix B – Analytical Laboratory Results

V:\230442 Singers Chevron\Deliverables\Work Plan for Additional Subject Property Investigation\Draft\Work Plan for Source Investigation_Draft_20231110.docx

TABLES

Table 1. Soil Results

Project No. 230442, Singer's Chevron, Walla Walla, Washington

	Sample Location	AMW-1	AMW-2	AMW-3	AMW-4
	Sample Date	10/19/2023	10/19/2023	10/19/2023	10/20/2023
	Depth[1]	15	10.5	14.5	10
Analyte	**MTCA Method A Soil Cleanup Level[2]**				
Total Petroleum Hydrocarbons (TPH)					
Gasoline Range Organics	30	**510**	**750**	< 3.0 U	**140**
Volatile Organic Compounds (VOC)					
Benzene	0.03	**3.4**	**4.8**	**0.045**	**0.63**
Ethylbenzene	6	**7.7**	**11**	**0.021**	**1.5**
m,p-Xylenes	--	**32**	**46**	**0.079**	**7.5**
o-Xylene	--	**12**	**17**	**0.031**	**3.5**
Total Xylenes	9	**44**	**63**	**0.11**	**11**
Toluene	7	**35**	**46**	**0.075**	**6.3**

Notes:

All results in milligrams per kilogram

Results in **bold** indicate the analyte was detected above the laboratory reporting limit

Results highlighted blue indicate an analyte was detected above the MTCA Method A cleanup level.

"--" = not analyzed

[1]All sample depths in feet below ground surface (bgs).

[2]Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Use.

U - Analyte not detected at or above Reporting Limit (RL) shown.

Table 2. Groundwater Elevations and Product Measurements

Project No. 230442, Singer's Chevron, Walla Walla, Washington

Well Identification	Data Collected by	Top of Casing Elevation (NAVD88)[1]	Top of Screen (feet bgs)[2]	Top Screen Elevation (NAVD88)	Bottom of Screen (feet bgs)	Bottom Screen Elevation (NAVD88)	Date	Depth to Product (feet below TOC)[3]	Depth to Groundwater (feet bTOC)	Thickness of Product (feet)	GW Elevation (NAVD88)
City Right-of-Way Wells											
MW-1*	Ecology	951.77	7.50	944.27	22.50	929.27	9/21/23	nm	11.82	nm	939.95
	Ecology						10/9/23	nm	11.54	nm	940.23
	Aspect						Monitoring well blocked at approximately 7 feet bTOC				
MW-2*	Ecology	952.51	7.50	945.01	24.93	927.58	9/21/23	nm	14.70	nm	937.81
	Ecology						10/9/23	nm	14.43	nm	938.08
	Aspect						10/17/23	NP	13.42	0.00	939.09
	Aspect						10/18/23	NP	14.26	0.00	938.25
MW-3*	Ecology	951.77	7.50	944.27	24.83	926.94	9/21/23	nm	9.38	nm	942.39
	Ecology						10/9/23	nm	10.78	nm	940.99
	Aspect						10/17/23	NP	10.53	0.00	941.24
	Aspect						10/18/23	NP	10.62	0.00	941.15
MW-4*	Ecology	950.50	7.50	943.00	22.50	928.00	9/21/23	nm	NA	nm	NA
	Ecology						10/9/23	nm	11.54	nm	938.96
MW-5	Ecology	953.00	7.50	945.50	24.77	928.23	9/24/23	nm	12.46	nm	940.54
	Ecology						10/9/23	12.43	12.45	0.02	940.55
	Aspect						10/17/23	NP	12.20	0.00	940.80
	Aspect						10/18/23	NP	12.16	0.00	940.84
	Aspect						11/8/23	NP	11.40	0.00	941.60
	Aspect						Monitoring well blocked at approximately 15 feet bTOC				
MW-6*	Ecology	954.06	7.50	946.56	24.13	929.93	9/24/23	nm	14.50	nm	939.56
	Ecology						10/9/23	11.33	12.88	1.55	**941.18**
	Aspect						10/17/23	10.85	11.07	0.22	**943.15**
	Aspect						10/18/23	10.83	11.02	0.19	**943.18**
	Aspect						11/8/23	9.55	9.73	0.18	**944.46**
MW-7	Aspect	951.82	10.00	941.82	25.00	926.82	10/18/23	NP	15.37	0.00	936.45
	Aspect						11/8/23	NP	14.22	0.00	937.60
MW-8	Aspect	954.95	10.00	944.95	25.00	929.95	10/18/23	NP	16.3	0.00	938.65
	Aspect						11/8/23	NP	12.97	0.00	941.98
MW-9	Aspect	954.87	10.00	944.87	25.00	929.87	10/17/23	NP	13.12	0.00	941.75
	Aspect						11/8/23	NP	11.06	0.00	943.81
Chevron Property Wells											
AMW-1	Aspect	953.65	5.00	948.65	20.00	933.65	10/19/23	NP	12.91	0.00	940.74
	Aspect						11/8/23	NP	11.81	0.00	941.84
AMW-2	Aspect	954.51	5.00	949.51	20.00	934.51	10/19/23	NP	13.91	0.00	940.60
	Aspect						11/8/23	NP	12.29	0.00	942.22
AMW-3	Aspect	953.74	5.00	948.74	20.00	933.74	10/19/23	NP	14.85	0.00	938.89
	Aspect						11/8/23	NP	14.12	0.00	939.62
AMW-4	Aspect	955.18	5.00	950.18	20.00	935.18	10/20/23	NP	12.03	0.00	943.15
	Aspect						11/8/23	NP	11.40	0.00	943.78

Notes:

Ecology data as reported to Aspect on 10/9/2023 by Clean Harbors

* = well located in active traffic lane

nm = indicates measurement not taken

NP = No Product measured in well

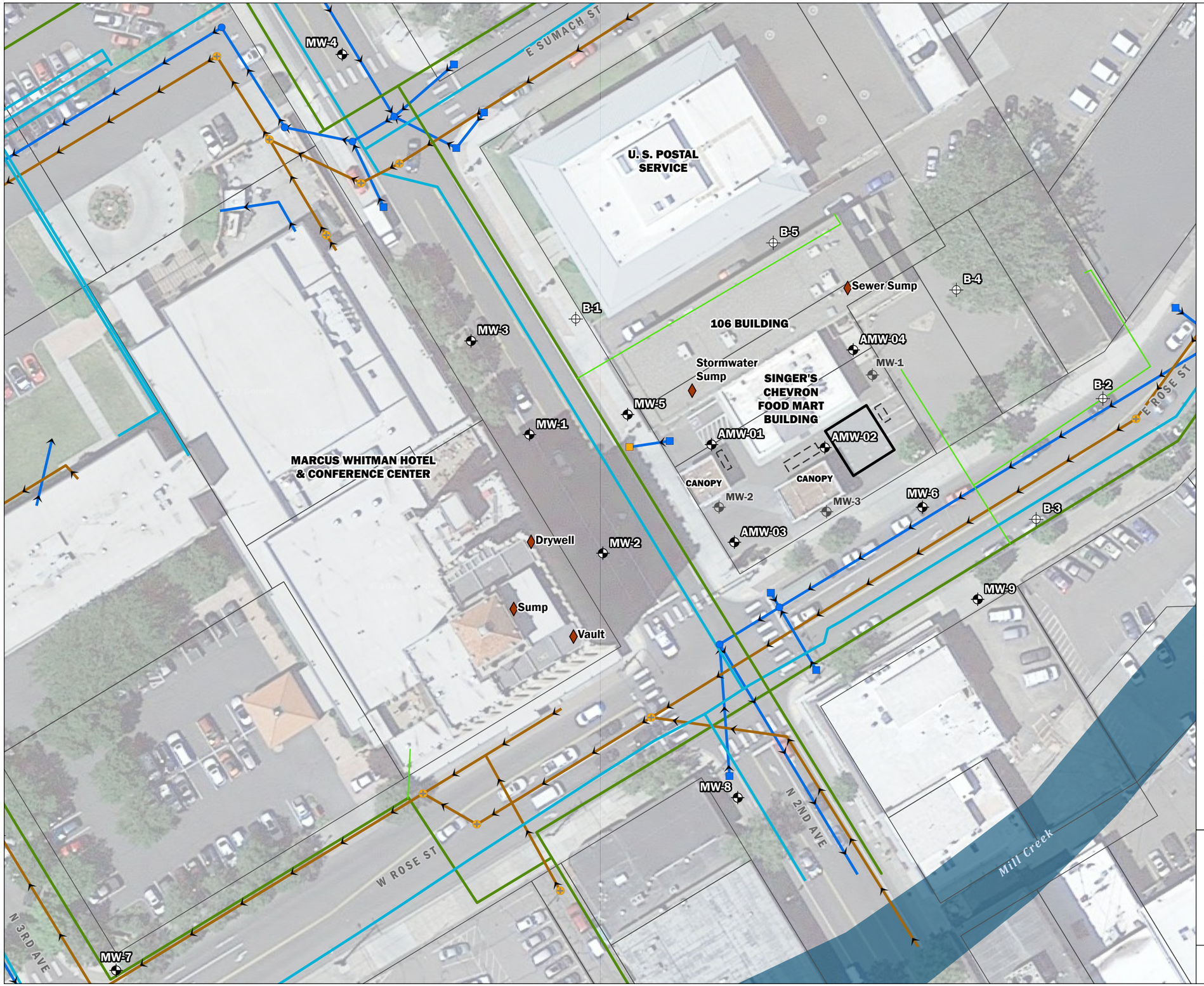
Bold - indicates groundwater elevation corrected for product depression using a specific gravity for gasoline of 0.745

[1]Elevations in feet relative to the North American Vertical Datum of 1988 (NAVD88)

[2]Depth in feet below ground surface (bgs)

[3]Depth to product and groundwater measured in feet below the top of casing (bTOC)

FIGURES



- Boring
- Monitoring Well
- Decommissioned Monitoring Well
- Sump
- Sewer Manhole
- Storm Manhole
- Catch Basin
- Bubble Up Catch Basin
- Sewer Main
- Storm Main
- Water Main
- CNGC Gas Main
- CNGC Gas Service Line
- Existing Underground Storage Tanks (UST)
- Decommissioned UST
- Walla Walla Tax Parcel

DRAFT

Notes:
- UST locations approximate from map provided by the City of Walla Walla.
- Utility locations approximate from map provided by the City of Walla Walla.
- Monitoring Well locations from survey provided by PBS Engineering and Environmental.
- Estimated groundwater flow direction approximate from Plateau Geoscience Group Quarterly Monitoring Report, Sept 2012.
- Decommissioned monitoring well locations approximate from Plateau Geoscience Group Quarterly Monitoring Report, Sept 2012.
- Sump locations approximate from map provided by Clean Harbors.
- Parcel boundaries from County of Walla Walla GIS.
- Mill Creek boundary from WADNR GIS.

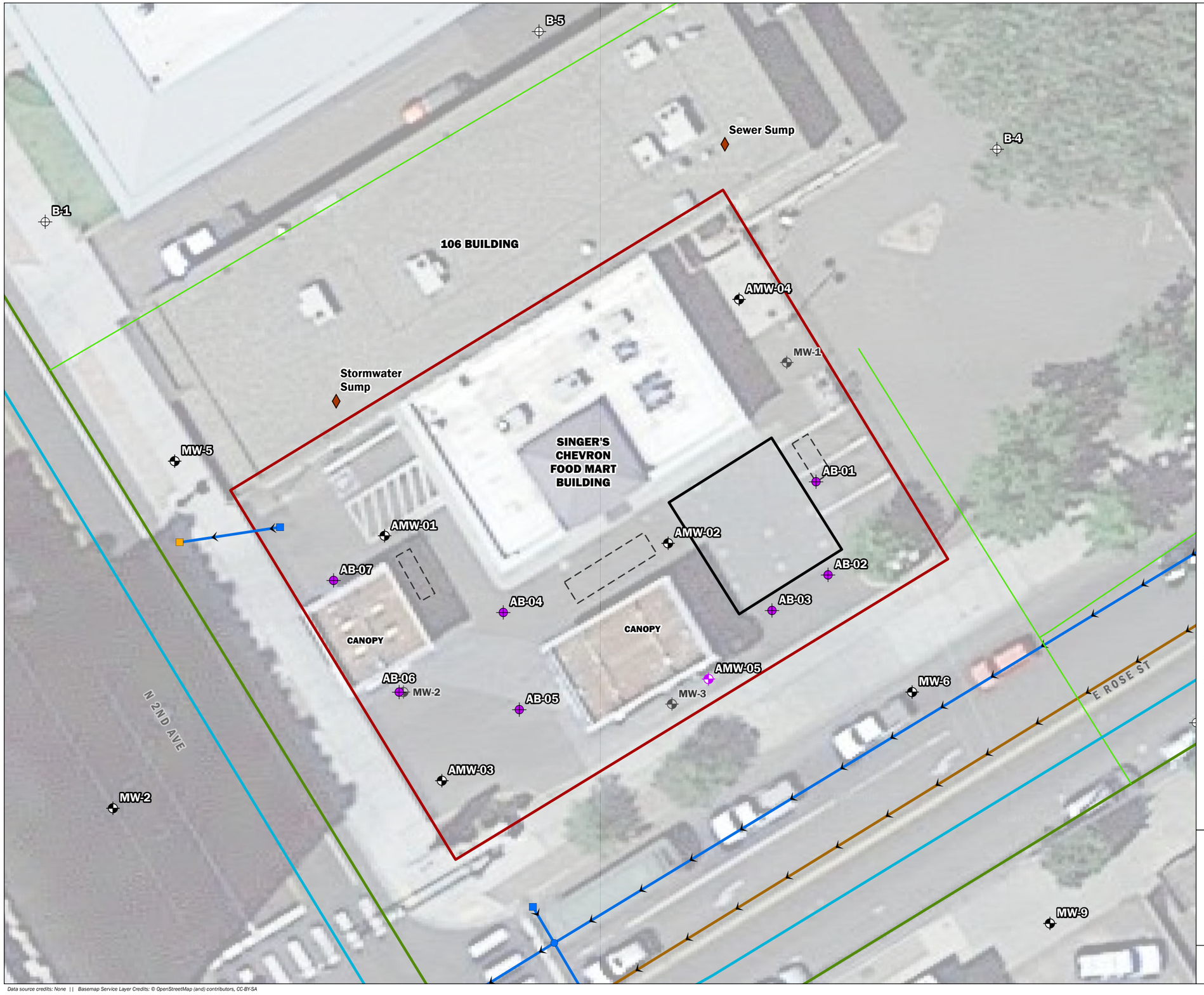
N

0 50 100 Feet

Site Map Showing Investigation Locations

Singer's Chevron
Walla Walla, Washington

Aspect CONSULTING	NOV-2023	BY: DIM / NLK	FIGURE NO. 1
	PROJECT NO. 230442	REVISED BY: CEB / RAP	



- Proposed Boring
- Proposed Monitoring Well
- Monitoring Well
- Boring
- Decommissioned Monitoring Well
- Sump
- Storm Manhole
- Catch Basin
- Bubble Up Catch Basin
- Sewer Main
- Storm Main
- Water Main
- CNGC Gas Main
- CNGC Gas Service Line
- Existing Underground Storage Tanks (UST)
- Decommissioned UST
- Approximate Property Boundary

DRAFT

Notes:
- UST locations approximate from map provided by the City of Walla Walla.
- Utility locations approximate from map provided by the City of Walla Walla.
- Monitoring Well locations from survey provided by PBS Engineering and Environmental.
- Estimated groundwater flow direction approximate from Plateau Geoscience Group Quarterly Monitoring Report, Sept 2012.
- Decommissioned monitoring well locations approximate from Plateau Geoscience Group Quarterly Monitoring Report, Sept 2012.
- Sump locations approximate from map provided by Clean Harbors.
- Parcel boundaries from County of Walla Walla GIS.
- Mill Creek boundary from WADNR GIS.

N

0 20 40 Feet

Proposed Investigation Locations on Chevron Property

Singer's Chevron
Walla Walla, Washington

Aspect CONSULTING	NOV-2023	BY: DIM / NLK	FIGURE NO. 2
	PROJECT NO. 230442	REVISED BY: CEB / RAP	

Data source credits: None | | Basemap Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA

APPENDIX A

Monitoring Well Logs

Coarse-Grained Soils - More than 50%[1] Retained on No. 200 Sieve	Gravels - More than 50%[1] of Coarse Fraction Retained on No. 4 Sieve	≤5% Fines	GW	Well-graded GRAVEL Well-graded GRAVEL WITH SAND
			GP	Poorly-graded GRAVEL Poorly-graded GRAVEL WITH SAND
		≥15% Fines	GM	SILTY GRAVEL SILTY GRAVEL WITH SAND
			GC	CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND
	Sands - 50%[1] or More of Coarse Fraction Passes No. 4 Sieve	≤5% Fines	SW	Well-graded SAND Well-graded SAND WITH GRAVEL
			SP	Poorly-graded SAND Poorly-graded SAND WITH GRAVEL
		≥15% Fines	SM	SILTY SAND SILTY SAND WITH GRAVEL
			SC	CLAYEY SAND CLAYEY SAND WITH GRAVEL
Fine-Grained Soils - 50%[1] or More Passes No. 200 Sieve	Silts and Clays Liquid Limit Less than 50%		ML	SILT SANDY or GRAVELLY SILT SILT WITH SAND SILT WITH GRAVEL
			CL	LEAN CLAY SANDY or GRAVELLY LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL
			OL	ORGANIC SILT SANDY or GRAVELLY ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL
	Silts and Clays Liquid Limit 50% or More		MH	ELASTIC SILT SANDY or GRAVELLY ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL
			CH	FAT CLAY SANDY or GRAVELLY FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL
			OH	ORGANIC CLAY SANDY or GRAVELLY ORGANIC CLAY ORGANIC CLAY WITH SAND ORGANIC CLAY WITH GRAVEL
Highly Organic Soils			PT	PEAT and other mostly organic soils

"WITH SILT" or "WITH CLAY" means 5 to 15% silt and clay, denoted by a "-" in the group name; e.g., SP-SM • "SILTY" or "CLAYEY" means >15% silt and clay • "WITH SAND" or "WITH GRAVEL" means 15 to 30% sand and gravel. • "SANDY" or "GRAVELLY" means >30% sand and gravel. • "Well-graded" means approximately equal amounts of fine to coarse grain sizes • "Poorly graded" means unequal amounts of grain sizes • Group names separated by "/" means soil contains layers of the two soil types; e.g., SM/ML.

Soils were described and identified in the field in general accordance with the methods described in ASTM D2488. Where indicated in the log, soils were classified using ASTM D2487 or other laboratory tests as appropriate. Refer to the report accompanying these exploration logs for details.

1. Estimated or measured percentage by dry weight
2. (SPT) Standard Penetration Test (ASTM D1586)
3. Determined by SPT, DCPT (ASTM STP399) or other field methods. See report text for details.

GEOTECHNICAL LAB TESTS

MC	=	Natural Moisture Content
PS	=	Particle Size Distribution
FC	=	Fines Content (% < 0.075 mm)
GH	=	Hydrometer Test
AL	=	Atterberg Limits
C	=	Consolidation Test
Str	=	Strength Test
OC	=	Organic Content (% Loss by Ignition)
Comp	=	Proctor Test
K	=	Hydraulic Conductivity Test
SG	=	Specific Gravity Test

CHEMICAL LAB TESTS

Organic Chemicals

BTEX	=	Benzene, Toluene, Ethylbenzene, Xylenes
TPH-Dx	=	Diesel and Oil-Range Petroleum Hydrocarbons
TPH-G	=	Gasoline-Range Petroleum Hydrocarbons
VOCs	=	Volatile Organic Compounds
SVOCs	=	Semi-Volatile Organic Compounds
PAHs	=	Polycyclic Aromatic Hydrocarbon Compounds
PCBs	=	Polychlorinated Biphenyls

Metals

RCRA8	=	As, Ba, Cd, Cr, Pb, Hg, Se, Ag, (d = dissolved, t = total)
MTCA5	=	As, Cd, Cr, Hg, Pb (d = dissolved, t = total)
PP-13	=	Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn (d=dissolved, t=total)

FIELD TESTS

PID	=	Photoionization Detector
Sheen	=	Oil Sheen Test
SPT[2]	=	Standard Penetration Test
NSPT	=	Non-Standard Penetration Test
DCPT	=	Dynamic Cone Penetration Test

COMPONENT DEFINITIONS

Descriptive Term		*Size Range and Sieve Number*
Boulders	=	Larger than 12 inches
Cobbles	=	3 inches to 12 inches
Coarse Gravel	=	3 inches to 3/4 inches
Fine Gravel	=	3/4 inches to No. 4 (4.75 mm)
Coarse Sand	=	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	=	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	=	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	=	Smaller than No. 200 (0.075 mm)

ESTIMATED[1] PERCENTAGE

% by Weight		*Modifier*	*% by Weight*		*Modifier*
<1	=	Subtrace	15 to 25	=	Little
1 to <5	=	Trace	30 to 45	=	Some
5 to 10	=	Few	>50	=	Mostly

MOISTURE CONTENT

Dry	=	Absence of moisture, dusty, dry to the touch
Slightly Moist	=	Perceptible moisture
Moist	=	Damp but no visible water
Very Moist	=	Water visible but not free draining
Wet	=	Visible free water, usually from below water table

RELATIVE DENSITY

Non-Cohesive or Coarse-Grained Soils

Density[3]		*SPT*[2] *Blows/Foot*	*Penetration with 1/2" Diameter Rod*
Very Loose	=	0 to 4	≥ 2'
Loose	=	5 to 10	1' to 2'
Medium Dense	=	11 to 30	3" to 1'
Dense	=	31 to 50	1" to 3"
Very Dense	=	> 50	< 1"

CONSISTENCY

Cohesive or Fine-Grained Soils

Consistency[3]		*SPT*[2] *Blows/Foot*	*Manual Test*
Very Soft	=	0 to 1	Penetrated >1" easily by thumb. Extrudes between thumb & fingers.
Soft	=	2 to 4	Penetrated 1/4" to 1" easily by thumb. Easily molded.
Medium Stiff	=	5 to 8	Penetrated >1/4" with effort by thumb. Molded with strong pressure.
Stiff	=	9 to 15	Indented ~1/4" with effort by thumb.
Very Stiff	=	16 to 30	Indented easily by thumbnail.
Hard	=	> 30	Indented with difficulty by thumbnail.

GEOLOGIC CONTACTS

Observed and Distinct — Observed and Gradual — Inferred

Aspect CONSULTING

Exploration Log Key

Aspect CONSULTING	Singers Chevron - 230442		Monitoring Well Log	
	Project Address & Site Specific Location Walla Walla, Washington, Chevron Property		*Coordinates (Lat,Lon WGS84)* 46.0679, -118.3401	*Exploration Number* **AMW-01**
Contractor Western States	*Equipment* Sonic Geoprobe 8510 LS	*Sampling Method* Autohammer; 140 lb hammer; 2" drop	*Ground Surface Elev. (NAVD88)* 953.9'	Ecology Well Tag No. BPD 822
Operator Alex McCann	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 10/19/2023	*Top of Casing Elev. (NAVD88)* 953.65'	*Depth to Water (Below GS)* 12.91' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		8" Flush mount, traffic-rated monument in concrete					CONCRETE; with base course	
							SILT (ML); soft, slightly moist, brown; low plasticity; trace fine sand; no hydrocarbon-like odor observed.	
	950							
5		4" schedule 40 PVC in 3/8" bentonite chips			SPT=4,8,11 PID=0.8 Sheen=NS PID=0.5 Sheen=NS			5
	945	12-20 silica sand						
10		▼ 10/19/2023			SPT=50/6 PID=26.2 Sheen=NS PID=24.1 Sheen=NS		GRAVEL WITH SILT (GP-GM); very dense, moist, brown; fine subrounded gravel; few fine sand; no hydrocarbon-like odor observed.	10
	940							
15				AMW-01-15 NWTPH-Gx and BTEX	SPT=12,24,29 PID=1461 Sheen=SS		SILTY GRAVEL (GM); very dense, wet, brown; fine subrounded gravel; few fine sand; no hydrocarbon-like odor observed.	15
		0.020" (20-slot) 4" schedule 40 PVC screen in sand						
	935							
20					PID=103 Sheen=SS PID=106 Sheen=SS		SILTY GRAVEL (GM); wet, dark brown; fine to coarse subrounded gravel; hydrocarbon-like odor observed.	20
		4" schedule 40 PVC Sump in sand						
	930							
25							Bottom of exploration at 25 ft. bgs. Note: Soil samples were classified and collected from a hollow-stem auger rig operated by Cameron Herber at Holt. Well was re-drilled 2 feet from original location and installed with Sonic Geoprobe 8510 LS operated by Western States.	25
	925							
30								30
	920							

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◪ Split Barrel 2" X 1.375" (SPT)
- ▩ Grab sample

Water Level
- ▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: DRB
Approved by: Carla Brock

Exploration Log AMW-01
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230442 - SINGERS CHEVRON.GPJ November 6, 2023

Singers Chevron - 230442

Monitoring Well Log

Aspect CONSULTING

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
Walla Walla, Washington, Chevron Property	46.0679, -118.3398	**AMW-02**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)	Ecology Well Tag No.
Western States	Sonic Geoprobe 8510 LS	Grab	954.73'	BPD 823

Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Alex McCann	Sonic	10/19/2023	954.51'	13.19' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		12" Flush mount, traffic-rated monument in concrete					ASPHALT; with base course Pea gravel, silt and coarse gravel observed in 0.5-5 ft	0
5	950	4" schedule 40 PVC in 3/8" bentonite chips			PID=76 ppm Sheen=NS PID=403 ppm Sheen=SS PID=1436 ppm Sheen=SS PID=1504 ppm Sheen=SS		SILTY GRAVEL (GM); moist, brown with gray gravel and cobbles;fine to coarse subrounded to rounded gravel; fine to coarse sand; hydrocarbon-like odor observed.	5
10	945	12-20 silica sand		AMW-02-10.5 NWTPH-Gx and BTEX	PID=2601 ppm Sheen=SS PID=3733 ppm Sheen=SS PID=92.6 ppm Sheen=SS PID=92.6 ppm Sheen=NS Sheen=SS		SILTY GRAVEL (GM); very moist, brown; fine to coarse subrounded to rounded gravel and cobbles; fine to coarse sand; hydrocarbon-like odor observed. becomes wet at 11 ft bgs	10
		▼ 10/19/2023						
15	940				Sheen=NS PID=310 ppm			15
		0.020" (20-slot) 4" schedule 40 PVC screen in sand			PID=1312 ppm			
20	935	▽ 10/19/2023 Casing depth 25 ft bgs			PID=57.6 ppm PID=2.4 ppm Sheen=NS		no hydrocarbon-like odor observed at 19 ft bgs SILTY GRAVEL (GM); moist to very moist, brown; fine to coarse subrounded to rounded gravel and cobbles; fine to coarse sand; no hydrocarbon-like odor observed.	20
		4" schedule 40 PVC Sump in sand			PID=3.7 ppm Sheen=NS			
25	930				PID=6.1 ppm Sheen=NS		Bottom of exploration at 25 ft. bgs.	25
30	925							30
	920							

Legend

Sample Type: Grab sample

Water Level: ▼ Static Water Level; ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DRB
Approved by: Carla Brock

Exploration Log AMW-02

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230442 - SINGERS CHEVRON.GPJ November 6, 2023

Aspect CONSULTING	Singers Chevron - 230442		Monitoring Well Log	
	Project Address & Site Specific Location Walla Walla, Washington, Chevron Property		*Coordinates (Lat,Lon WGS84)* 46.0677, -118.3400	*Exploration Number* **AMW-03**
Contractor Western States	*Equipment* Sonic Geoprobe 8510 LS	*Sampling Method* Grab	*Ground Surface Elev. (NAVD88)* 953.99'	Ecology Well Tag No. BPD 820
Operator Alex McCann	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 10/19/2023	*Top of Casing Elev. (NAVD88)* 953.74'	*Depth to Water (Below GS)* 14.85' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	953.99	12" Flush mount, traffic-rated monument in concrete			PID=0.4 ppm		ASPHALT; with base course	0
							SILT (ML); medium stiff, moist, dark brown; low plasticity; few coarse subangular to subrounded gravel.	
					PID=0.2 ppm			
5	950				PID=0.3 ppm		GRAVEL WITH SILT (GW-GM); moist, brown; fine to coarse subrounded to rounded gravel and cobbles; coarse sand.	5
		4" schedule 40 PVC in 3/8" bentonite chips			PID=0.4 ppm			
					PID=0.1 ppm			
	945	12-20 silica sand						
10					PID=1.3 ppm		SILTY GRAVEL (GM); moist, brown with gray gravel and cobbles; fine to coarse subrounded to rounded gravel and cobbles; coarse sand.	10
					PID=0.4 ppm			
	940				PID=0.5 ppm			
15		10/19/2023		AMW-03-14.5 NWTPH-Gx and BTEX			becomes wet at 15 ft bgs	15
					PID=1.2 ppm			
		0.020" (20-slot) 4" schedule 40 PVC screen in sand			PID=1.3 ppm			
	935	10/19/2023 Casing depth 25 ft bgs			PID=7.4 ppm			
20					PID=1.0 ppm		SILTY GRAVEL (GM); very moist, brown; fine to coarse subrounded to rounded gravel and cobbles; fine to coarse sand.	20
		4" schedule 40 PVC Sump in sand						
	930				PID=0.8 ppm			
25					PID=2.6 ppm		Bottom of exploration at 25 ft. bgs. Note: No sheen or hydrocarbon-like odor observed throughout.	25
	925							
30								30
	920							

Legend

Sample Type: Grab sample

Water Level: Static Water Level; Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DRB
Approved by: Carla Brock

Exploration Log AMW-03
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230442 - SINGERS CHEVRON.GPJ November 6, 2023

Aspect CONSULTING	Singers Chevron - 230442		Monitoring Well Log	
	Project Address & Site Specific Location: Walla Walla, Washington, Chevron Property		Coordinates (Lat,Lon WGS84): 46.0680, -118.3398	Exploration Number: **AMW-04**
Contractor: Western States	Equipment: Sonic Geoprobe 8510 LS	Sampling Method: Grab	Ground Surface Elev. (NAVD88): 955.38'	Ecology Well Tag No. BPD 824
Operator: Alex McCann	Exploration Method(s): Sonic	Work Start/Completion Dates: 10/20/2023	Top of Casing Elev. (NAVD88): 955.18'	Depth to Water (Below GS): 12.03' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	955	12" Flush mount, traffic-rated monument in concrete					CONCRETE; with base course	0
							SILT WITH GRAVEL (ML); medium stiffness, moist, dark brown; low plasticity; fine to coarse subangular to rounded gravel; few fine to coarse sand; no bydrocarbon-like odor observed.	
5	950	4" schedule 40 PVC in 3/8" bentonite chips			PID=0.9 ppm Sheen=NS		GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, brown with gray gravel and cobbles; fine to coarse subrounded gravel and cobbles; fine to coarse sand; no hydrocarbon-like odor observed.	5
					PID=2.2 ppm Sheen=NS			
		12-20 silica sand						
10	945	10/20/2023		AMW-04-10 NWTPH-Gx and BTEX	PID=1.3 ppm Sheen=NS		SILTY GRAVEL (GM); wet, brown; fine to coarse subrounded to rounded gravel and cobbles; fine to coarse sand; hydrocarbon-like odor observed.	10
					PID=15000 ppm Sheen=MS			
					PID=15000 ppm Sheen=MS			
15	940				PID=84.1 ppm Sheen=SS		increased silt content and slight hydrocarbon-like odor observed at 14 ft bgs	15
		0.020" (20-slot) 4" schedule 40 PVC screen in sand			PID=4.4 ppm Sheen=NS			
					PID=12.3 ppm Sheen=NS			
20	935				PID=0.4 ppm Sheen=NS		SILTY GRAVEL (GM); slightly moist, brown; coarse subrounded to rounded gravel; coarse sand; increased silt content; no hydrocarbon-like odor observed.	20
		10/20/2023 Casing depth 25 ft bgs			PID=0.3 ppm Sheen=NS			
		4" schedule 40 PVC Sump in sand						
25	930				PID=0.7 ppm Sheen=NS		Bottom of exploration at 25 ft. bgs.	25
30	925							30

Legend

Sample Type: Grab sample

Water Level: Static Water Level; Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DRB
Approved by: Carla Brock

Exploration Log AMW-04
Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230442 - SINGERS CHEVRON.GPJ November 6, 2023

Aspect CONSULTING	Singers Chevron - 230442		Monitoring Well Log	
	Project Address & Site Specific Location Walla Walla, Washington, Northeast corner of Rose and 3rd St		*Coordinates (Lat,Lon WGS84)* 46.0672, -118.3413	*Exploration Number* **MW-7**
Contractor Western States	*Equipment* Sonic Geoprobe 8510 LS	*Sampling Method* Grab	*Ground Surface Elev. (NAVD88)* 951.95'	Ecology Well Tag No. BPQ 389
Operator Alex McCann	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 10/18/2023	*Top of Casing Elev. (NAVD88)* 951.82'	*Depth to Water (Below GS)* 15.37' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	950	8" Flush mount, traffic-rated monument in concrete			PID=1.0 ppm Sheen=NS		CONCRETE; with 5/8 base course GRAVEL WITH SILT (GW-GM); moist, dark brown; fine to coarse angular to subangular gravel; fine to coarse sand; brick debris observed down to 10 ft bgs.	0
5	945	4" schedule 40 PVC in 3/8" bentonite chips #12 (10-20) silica sand			PID=1.9 ppm Sheen=NS PID=1.2 ppm Sheen=NS PID=1.9 ppm Sheen=NS PID=2.3 ppm Sheen=NS			5
10	940				PID=2.9 ppm Sheen=NS PID=2.1 ppm Sheen=NS		GRAVEL WITH SILT AND SAND (GW-GM); moist, brown; fine to coarse subangular to subrounded gravel. SILTY GRAVEL (GM); very moist, dark brown; fine to coarse subrounded to rounded gravel and cobbles; fine to coarse sand.	10
15	935	10/18/2023 0.010" (10-slot) 4" schedule 40 PVC screen in sand			PID=5.3 ppm Sheen=NS PID=8.8 ppm Sheen=NS PID=10.1 ppm Sheen=NS			15
20	930				PID=1.8 ppm Sheen=NS PID=2.8 ppm Sheen=NS		SILTY GRAVEL (GM); wet, dark brown; fine to coarse subrounded to rounded gravel; fine to coarse sand.	20
25	925	5" Well cap in sand			PID=1.4 ppm Sheen=NS		Bottom of exploration at 25 ft. bgs. Note: No sheen or hydrocarbon-like odor observed throughout.	25
30	920							30

Legend

Sample Type

Water Level — ▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: DRB
Approved by: Carla Brock

Exploration Log MW-7

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230442 - SINGERS CHEVRON.GPJ November 6, 2023

Singers Chevron - 230442

Monitoring Well Log

Aspect CONSULTING

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
Walla Walla, Washington, 27 N 2nd St	46.0674, -118.3400	**MW-8**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)	Ecology Well Tag No.
Western States	Sonic Geoprobe 8510 LS	Grab	955.15'	BPQ 389

Operator	Exploration Method(s)	Work Start/Completion Dates	Top of Casing Elev. (NAVD88)	Depth to Water (Below GS)
Alex McCann	Sonic	10/18/2023	954.95'	16.3' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	955	8" Flush mount, traffic-rated monument in concrete			PID=2.2 ppm Sheen=NS		Brick sidewalk	0
							GRAVEL WITH SILT AND SAND (GW-GM); moist, dark brown; fine to coarse subrounded to rounded gravel; rounded cobbles; fine to coarse sand.	
					PID=3.5 ppm Sheen=NS		SILT WITH GRAVEL (ML); slightly moist, brown; low plasticity; fine to coarse subrounded gravel; broken PVC pieces observed.	
5	950	4" schedule 40 PVC in 3/8" bentonite chips			PID=3.8 ppm Sheen=NS			5
					PID=1.3 ppm Sheen=NS		GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, brown; fine to coarse subangular to rounded gravel; fine to coarse sand.	
		#12 (10-20) silica sand			PID=1.8 ppm Sheen=NS		becomes gray at 7.5 ft bgs	
10	945				PID=5.3 ppm Sheen=NS			10
					PID=2.8 ppm Sheen=NS			
					PID=2.9 ppm Sheen=NS		SILTY GRAVEL (GM); very moist, dark brown with gray gravel; fine to coarse subrounded to rounded gravel; fine to coarse sand.	
15	940	▼ 10/18/2023						15
		0.010" (10-slot) 4" schedule 40 PVC screen in sand			PID=2.3 ppm Sheen=NS		becomes wet and dark brown with yellow cobbles at 17 ft bgs	
		▽ 10/18/2023			PID=1.4 ppm Sheen=NS			
20	935				PID=3.3 ppm Sheen=NS		SILTY GRAVEL (GM); very moist, dark brown; fine to coarse rounded gravel; fine to coarse sand.	20
					PID=3.5 ppm Sheen=NS			
25	930	5" Well cap in sand			PID=3.0 ppm Sheen=NS		Bottom of exploration at 25 ft. bgs.	25
							Note: No sheen or hydrocarbon-like odor observed throughout.	
30	925							30

Legend

Sample Type

Water Level
- ▼ Static Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DRB
Approved by: Carla Brock

Exploration Log MW-8

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230442 - SINGERS CHEVRON.GPJ November 6, 2023

Aspect CONSULTING	Singers Chevron - 230442		Monitoring Well Log	
	Project Address & Site Specific Location Walla Walla, Washington, Near 2nd and Rose St		*Coordinates (Lat,Lon WGS84)* 46.0677, -118.3395	*Exploration Number* **MW-9**
Contractor Western States	*Equipment* Sonic Geoprobe 8510 LS	*Sampling Method* Grab	*Ground Surface Elev. (NAVD88)* 955.04'	Ecology Well Tag No. BPQ 388
Operator Alex McCann	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 10/17/2023	*Top of Casing Elev. (NAVD88)* 954.87'	*Depth to Water (Below GS)* 13.12' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		8" Flush mount, traffic-rated monument in concrete			PID=0.9 ppm Sheen=NS		CONCRETE; with base course	
					PID=1.0 ppm Sheen=NS		SILT WITH GRAVEL (ML); medium stiffness, moist, dark brown; low plasticity; fine to coarse subrounded gravel; plastic debris observed at 1 foot bgs.	
					PID=1.6 ppm Sheen=NS			
					PID=1.1 ppm Sheen=NS			
5	950	4" schedule 40 PVC in 3/8" bentonite chips			PID=1.1 ppm Sheen=NS		GRAVEL WITH SILT (GW-GM); slightly moist, brown with gray gravel; fine to coarse subangular to rounded gravel; fine to coarse sand.	5
					PID=1.2 ppm Sheen=NS			
					PID=2.2 ppm Sheen=NS			
					PID=1.2 ppm Sheen=NS		SILTY GRAVEL (GM); slightly moist, brown with gray gravel and cobbles; fine to coarse subangular to rounded gravel and cobbles; fine to coarse sand.	
		#12 (10-20) silica sand			PID=1.5 ppm Sheen=NS			
10	945				PID=1.4 ppm Sheen=NS			10
					PID=1.9 ppm Sheen=NS			
					PID=2.4 ppm Sheen=NS		becomes dark brown with yellow brown gravel and cobbles at 11 ft bgs	
		▼ 10/17/2023			PID=8.9 ppm Sheen=NS			
					PID=12.4 ppm Sheen=NS			
15	940				PID=23.0 ppm Sheen=NS			15
					PID=2.1 ppm Sheen=NS		becomes wet at 16 ft bgs	
		0.010" (10-slot) 4" schedule 40 PVC screen in sand			PID=1.7 ppm Sheen=NS			
					PID=2.5 ppm Sheen=NS			
					PID=1.2 ppm Sheen=NS			
20	935				PID=2.6 ppm Sheen=NS			20
					PID=1.8 ppm Sheen=NS			
					PID=1.9 ppm Sheen=NS			
					PID=1.9 ppm Sheen=NS			
					PID=1.6 ppm Sheen=NS			
25	930	5" Well cap in sand			PID=1.6 ppm Sheen=NS		Bottom of exploration at 25 ft. bgs. Note: No sheen or hydrocarbon-like odor observed throughout.	25
30	925							30

Legend

Sample Type

Water Level ▼ Static Water Level

See Exploration Log Key for explanation of symbols

Logged by: DRB
Approved by: Carla Brock

Exploration Log MW-9

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\230442 - SINGERS CHEVRON.GPJ November 6, 2023

APPENDIX B

Analytical Laboratory Results

November 2, 2023

Ms. Carla Brock
Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104

Dear Ms. Brock,

On October 24th, 10 samples were received by our laboratory and assigned our laboratory project number EV23100126. The project was identified as your 230442. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/2/2023 EV23100126 EV23100126-04
CLIENT CONTACT:	Carla Brock	DATE RECEIVED:	10/24/2023
CLIENT PROJECT:	230442	COLLECTION DATE:	10/19/2023 9:40:00 AM
CLIENT SAMPLE ID	AMW-1-15.0	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**510**	30	10	MG/KG	10/30/2023	DLC
Benzene	EPA-8260	**3400**	20	1	UG/KG	10/30/2023	DLC
Toluene	EPA-8260	**35000**	120	10	UG/KG	10/30/2023	DLC
Ethylbenzene	EPA-8260	**7700**	170	10	UG/KG	10/30/2023	DLC
m,p-Xylene	EPA-8260	**32000**	340	10	UG/KG	10/30/2023	DLC
o-Xylene	EPA-8260	**12000**	210	10	UG/KG	10/30/2023	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 10X Dilution	NWTPH-GX	**180 GS2**	10/30/2023	DLC
Toluene-d8	EPA-8260	**86.0**	10/30/2023	DLC
Toluene-d8 10X Dilution	EPA-8260	**99.9**	10/30/2023	DLC

GS2 - Surrogate outside of control limits due to dilution.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/2/2023 EV23100126 EV23100126-05
CLIENT CONTACT:	Carla Brock	DATE RECEIVED:	10/24/2023
CLIENT PROJECT:	230442	COLLECTION DATE:	10/19/2023 12:45:00 PM
CLIENT SAMPLE ID	AMW-2-10.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**750**	30	10	MG/KG	10/30/2023	DLC
Benzene	EPA-8260	**4800**	180	10	UG/KG	10/30/2023	DLC
Toluene	EPA-8260	**46000**	220	20	UG/KG	10/31/2023	DLC
Ethylbenzene	EPA-8260	**11000**	150	10	UG/KG	10/30/2023	DLC
m,p-Xylene	EPA-8260	**46000**	300	10	UG/KG	10/30/2023	DLC
o-Xylene	EPA-8260	**17000**	190	10	UG/KG	10/30/2023	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 10X Dilution	NWTPH-GX	**290 GS2**	10/30/2023	DLC
Toluene-d8 10X Dilution	EPA-8260	**90.9**	10/30/2023	DLC
Toluene-d8 20X Dilution	EPA-8260	**99.7**	10/31/2023	DLC

GS2 - Surrogate outside of control limits due to dilution.
Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/2/2023 EV23100126 EV23100126-07
CLIENT CONTACT:	Carla Brock	DATE RECEIVED:	10/24/2023
CLIENT PROJECT:	230442	COLLECTION DATE:	10/19/2023 6:05:00 PM
CLIENT SAMPLE ID	AMW-3-14.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	10/30/2023	DLC
Benzene	EPA-8260	**45**	17	1	UG/KG	10/30/2023	DLC
Toluene	EPA-8260	**75**	10	1	UG/KG	10/30/2023	DLC
Ethylbenzene	EPA-8260	**21**	14	1	UG/KG	10/30/2023	DLC
m,p-Xylene	EPA-8260	**79**	27	1	UG/KG	10/30/2023	DLC
o-Xylene	EPA-8260	**31**	17	1	UG/KG	10/30/2023	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**82.7**	10/30/2023	DLC
Toluene-d8	EPA-8260	**96.2**	10/30/2023	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE: ALS JOB#: ALS SAMPLE#:	11/2/2023 EV23100126 EV23100126-08
CLIENT CONTACT:	Carla Brock	DATE RECEIVED:	10/24/2023
CLIENT PROJECT:	230442	COLLECTION DATE:	10/20/2023 8:20:00 AM
CLIENT SAMPLE ID	AMW-4-10.0	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**140**	30	10	MG/KG	10/30/2023	DLC
Benzene	EPA-8260	**630**	8.8	1	UG/KG	10/30/2023	DLC
Toluene	EPA-8260	**6300**	100	10	UG/KG	10/30/2023	DLC
Ethylbenzene	EPA-8260	**1500**	10	1	UG/KG	10/30/2023	DLC
m,p-Xylene	EPA-8260	**7500**	200	10	UG/KG	10/30/2023	DLC
o-Xylene	EPA-8260	**3500**	100	10	UG/KG	10/30/2023	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT 10X Dilution	NWTPH-GX	**84.9**	10/30/2023	DLC
Toluene-d8 10X Dilution	EPA-8260	**97.3**	10/30/2023	DLC
Toluene-d8	EPA-8260	**93.1**	10/30/2023	DLC

Chromatogram indicates that it is likely that sample contains lightly weathered gasoline.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Aspect Consulting, LLC 710 - 2nd Ave, Suite 550 Seattle, WA 98104	DATE:	11/2/2023
		ALS SDG#:	EV23100126
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Carla Brock		
CLIENT PROJECT:	230442		

LABORATORY BLANK RESULTS

MBG-103023S - Batch 202748 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	MG/KG	3.0	10/30/2023	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-103023S - Batch 202842 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8260	U	UG/KG	5.0	10/30/2023	DLC
Toluene	EPA-8260	U	UG/KG	10	10/30/2023	DLC
Ethylbenzene	EPA-8260	U	UG/KG	10	10/30/2023	DLC
m,p-Xylene	EPA-8260	U	UG/KG	20	10/30/2023	DLC
o-Xylene	EPA-8260	U	UG/KG	10	10/30/2023	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Aspect Consulting, LLC
710 - 2nd Ave, Suite 550
Seattle, WA 98104
CLIENT CONTACT: Carla Brock
CLIENT PROJECT: 230442

DATE: 11/2/2023
ALS SDG#: EV23100126
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 202748 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**101**			66.5	122.7	10/30/2023	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**102**	**1**		66.5	122.7	10/30/2023	DLC

ALS Test Batch ID: 202842 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8260	**115**			75	138	10/30/2023	DLC
Benzene - BSD	EPA-8260	**110**	**4**		75	138	10/30/2023	DLC
Toluene - BS	EPA-8260	**115**			71.6	122.1	10/30/2023	DLC
Toluene - BSD	EPA-8260	**110**	**5**		71.6	122.1	10/30/2023	DLC
Ethylbenzene - BS	EPA-8260	**110**			50	150	10/30/2023	DLC
Ethylbenzene - BSD	EPA-8260	**104**	**5**		50	150	10/30/2023	DLC
m,p-Xylene - BS	EPA-8260	**111**			50	150	10/30/2023	DLC
m,p-Xylene - BSD	EPA-8260	**105**	**6**		50	150	10/30/2023	DLC
o-Xylene - BS	EPA-8260	**117**			50	150	10/30/2023	DLC
o-Xylene - BSD	EPA-8260	**112**	**5**		50	150	10/30/2023	DLC

APPROVED BY

Rob Greer
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV2310126

Date 10/24/23 Page 1 Of 1

PROJECT ID: 230442
REPORT TO COMPANY: Aspect Consulting
PROJECT MANAGER: Carla Brock
ADDRESS: 710 2nd Ave, Suite 550 Seattle, WA
PHONE: 316.617.0499 P.O. #: —
E-MAIL: carla.brock@aspectconsulting.com
INVOICE TO COMPANY: Colony Insurance # 317275
ATTENTION:
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ / BTEX by EPA 8260 ☒	MTBE by EPA 8021 ☐ / MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ / Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ / RCRA-8 ☐ / Pri Pol ☐ / TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ / VOA ☐ / Semi-Vol ☐ / Pest ☐ / Herbs ☐	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-9-15.0	10/17/23	1330	Soil	1																2	
2. MW-8-16.0	10/18/23	0905		2																2	
3. MW-7-20.0	10/18/23	1325		3																2	
4. AMW-1-15.0	10/19/23	0940		4			X	X												2	
5. AMW-2-10.5	↓	1245		5			X	X												2	
6. AMW-2-20.5		1255		6																2	
7. AMW-3-14.5	↓	1805		7			X	X												2	
8. AMW-4-10.0	10/20/23	0820		8			X	X												2	
9. AMW-4-16.0	10/20/23	0825	↓	9																2	
10. Tripblank	—	—	W	10																1	

OTHER (Specify)

SPECIAL INSTRUCTIONS: (X) — Daniel added tests on 10/27/23. Sm

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Lillian Graham, Aspect, 10/24/23
   Received By: AFREESE, ALS, 10-24-23 @1345
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | 1 | SAME DAY

OTHER:
Specify: Hold all samples until further instruction

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: ASPECT CONSULTING ALS Job #: EV2310126

Project: 230 442

Received Date: 10-24-23 Received Time: 1345 By: AHF

Type of shipping container: Cooler X Box ____ Other ____

Shipped via: FedEx Ground ____ UPS ____ Mail ____ Courier ALS X Hand Delivered ____
FedEx Express ____

	Yes	No	N/A
Were custody seals on outside of shipping container?	____	____	X
If yes, how many? ____ Where? ____			
Custody seal date: ____ Seal name: ____			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	X	____	____
Did all bottles have labels?	X	____	____
Did all bottle labels and tags agree with Chain of Custody?	X	____	____
Were samples received within hold time?	X	____	____
Did all bottles arrive in good condition (unbroken, etc.)?	X	____	____
Was sufficient amount of sample sent for the tests indicated?	X*	____	____
Was correct preservation added to samples?	X*	____	____

If no, Sample Control added preservative to the following:

Sample Number	Reagent	Analyte

9 HI-KITS

Were VOA vials checked for absence of air bubbles? X ____ ____

Bubbles present in sample #: NONE (11)

Temperature of cooler upon receipt: 1.9°C ICE Cold Cool Ambient N/A

Explain any discrepancies: * SAMPLES ON HOLD. NO TEST PRESENTLY INDICATED. CLIENT WILL CONTACT.

Was client contacted? ____ Who was called? ____ By whom? ____ Date: ____

Outcome of call: ____