December 30, 2021

Mr. Shawn Rahimzadeh
Excellent Choice Auto Sales
P.O Box 13440
Mill Creek, Washington 98082

Subject: **2021 PersulfOx Chemical Injection Event Report**
Marysville Excellent Choice Auto Sales
9302, 9310, and 9314 State Avenue
Marysville, Washington 98270
RGI Project No. 2018-244-6

Dear Mr. Rahimzadeh

The Riley Group, Inc. (RGI) is pleased to present our groundwater PersulfOx Chemical Injection Event Report. The PersulfOx chemical injection events were performed on the subject Property, the first event was performed in June of 2021 and the second event was performed in July of 2021.

In conjunction with the June and July 2021 chemical injection events, RGI installed two additional groundwater monitoring wells MW4 and MW5. Groundwater monitoring wells MW4 and MW5 were installed on June 11, 2021 and July 15, 2021, respectively.

PROJECT BACKGROUND

RGI completed the following previous environmental reports as follows:

- Phase I Environmental Site Assessment (ESA); prepared by RGI; dated December 12, 2018 (Project No. 2018-244).
- Preliminary Phase II Subsurface Investigation; prepared by RGI; dated March 21, 2019 (Project No. 2018-244A).
- Supplemental Phase II Subsurface Investigation; prepared by RGI; dated September 19, 2019 and subsequent one page corrective letter dated January 25, 2021 (Project No. 2018-244B).
- Groundwater Monitoring Well Installation; prepared by RGI; dated January 18, 2021 and subsequent one page correction letter dated January 25, 2021 (Project no. 2018-244-1).
- Additional Groundwater Investigation; prepared by RGI; dated March 24, 2021 (Project No. 2018-244-2).
- 2021 Third Quarter Groundwater Monitoring Report; prepared by RGI; dated November 4, 2021 (Project no. 2018-244-5).

For reference, all previous soil sample locations and analytical results up through March of 2021 are summarized in Figure 2 and Table 1.

All previous test probe groundwater grab sample locations and analytical results up through March of 2021 are summarized in Figure 3 and Table 2.

All previous groundwater monitoring well locations and analytical results up through September of 2021 are summarized in Figure 4 and Table 3.

All soil and groundwater grab sample locations and analytical results obtained during RGI's recent June and July of 2021 chemical injection events are summarized in Figure 5 and 6 and Tables 4 and 5.

For additional information the reader is recommended to review the previous reports in their entirety.

The above-referenced previous reports are summarized as follows:

Phase I ESA (December of 2018)

Based on our Phase I ESA findings, the following Recognized Environmental Condition (REC) was identified in connection with the Property:

- **Historical Gasoline Service Station:** A gasoline station and/or automotive repair facility occupied the Property between approximately 1974 and 1994 (20 years). The historical use, handling, storage, and disposal of petroleum products, solvents, and other wastes typically associated with this gasoline fueling and service station was identified as a potential threat to soil and/or groundwater quality.

  Based on our initial interpretation of historical tax assessor records, five underground hydraulic hoists were present. However, based on our subsequent review of the historical tax assessor records only one single underground hoist was present and currently exists on-site (what originally was thought to consist of "5" hoists was actually just one "S" (signal post) hoists. In addition, RGI initially inferred that three pump islands were historically present on-site. However, based on our subsequent review of the records, it turned out to be just one single "3 x 10" pump island. Two 550 USTs and one 2,000 gallon UST were listed as being present on the Property.

  The historical gasoline service station was considered a REC.

- ***Historical Oil Burner**:* Historical records indicated that the middle building on the Property was previously heated by an oil burner (stored in either a UST or AST). The potential of a heating oil UST on the Property was considered a REC. However, the historical records indicated that the middle building was heated by an *oil stove* and most likely was an AST to fuel a suspended heater. Based on our subsequent ground penetrating radar survey an abandoned heating oil UST was not identified. In conclusion, it is our opinion that the heating oil UST was not present.

RGI recommended a Limited Phase II Subsurface Investigation be performed to evaluate soil and groundwater quality underlying the Property.

Preliminary Phase II (March of 2019)

RGI advanced six test probes (B1 to B6) on the Property to depths of 30-ft. below ground surface (bgs) for soil and groundwater sample collection and laboratory analysis for the contaminants of concern (COCs). Groundwater was encountered at depths of approximately 27-ft. bgs. Soils encountered during drilling to depths of up to 37-ft bgs consisted primarily of sand.

The location of test probes B1 to B6 and a summary of the soil and groundwater analytical results are summarized in the attached Figure 2 and Figure 3, respectively.

The COCs for soil and/or groundwater grab samples collected from five of the six test probes (B1, B2, B3, B5, and B6) were either not detected at the analytical laboratory's Practical Quantification Limit (PQL) or had trace concentrations of diesel-range total petroleum hydrocarbons (TPH) – well below their applicable MTCA Method A Cleanup Levels (CULs).

Groundwater grab samples collected from test probe B4 were analyzed for Volatile Organic Compounds (VOCs). Test probe B4 encountered only gasoline in groundwater at a concentration of 1,300 µg/L (above the CUL of 1,000 µg/L). All other VOCs in groundwater were not detected at their respective PQLs. Vadose zone soils (soils located above the soil/groundwater interface) encountered during drilling did not detect the presence of any petroleum contaminated soils. Test probe B4 was located west and downgradient of the former gasoline service station.

Based on our findings at that time, RGI recommended additional subsurface investigation in an effort to better define the nature and extent of contamination. In addition, RGI notified the Client of their obligations to report the confirmed release to the Ecology Northwest Regional Office located in Bellevue, Washington.

Supplemental Phase II January of 2019 with Correction Letter (January of 2021)

RGI advanced six test probes (TP1 to TP6) on the Property to depths of up to 35-ft. bgs for soil and groundwater sample collection and laboratory analysis for the COCs. In addition, RGI performed two geophysical surveys in an effort to locate any abandoned or out-of-service UST, pump island, or related steel piping on the Property. RGI was unable to locate any UST, pump island, and/or any related underground product piping.

The location of test probes TP1 to TP6 and a summary of the soil and groundwater analytical results are summarized in the attached Figure 2 and Figure 3, respectively. The test probes were advanced within, upgradient, and downgradient of the former gasoline service station footprint.

The COCs for soil samples collected from four of the six test probes (TP1 to TP4) were not detected at the analytical laboratory's PQL. The other two test probes TP5 and TP6 encountered contaminated soils at the soil/groundwater interface with gasoline-range TPH concentrations of 2,800 µg/L (TP5) and 64 µg/L (TP6), respectively.

The COCs for groundwater grab samples collected from five of the six test probes (TP1-TP3, TP5, and TP6) were either not detected at the analytical laboratory's PQL; or had concentrations below their applicable MTCA Method A CULs. Test probe TP4 had a groundwater concentration of 1,900 µg/l (above the CUL). In addition, other VOCs in groundwater at TP4 were not detected above their respective PQLs or CULs.

Based on our findings at that time, RGI recommended additional subsurface investigation in an effort to better define the nature and extent of contamination. In addition, RGI notified the Client of their obligations to report the confirmed release to Ecology's Northwest Regional Office.

Groundwater Monitoring Well Installation and Sampling (January of 2021) with Correction Letter (January of 2021)

RGI installed three groundwater monitoring wells MW1, MW2, and MW3. Continuous soil samples were collected for potential laboratory analysis. These monitoring wells were installed on the Property to depths of up to 37-ft. bgs. Groundwater samples were collected and analyzed for the COCs on December 23, 2020.

The well locations and a summary of the soil and groundwater analytical results are summarized in the attached Figure 2 and Figure 4.

Wells MW1 and MW2 were installed downgradient of the inferred groundwater contaminant plume footprint. Well MW3 was installed upgradient of the inferred groundwater contaminant plume.

A total of 18 discrete soil samples were collected from each borehole, at approximate 5-ft. sampling depth intervals (from 5-ft. up to 29-ft. bgs). All 18 soil samples were screened in the field for VOCs using a portable gas analyzer equipped with a photoionization detector (PID). All vadose zone soil - PID readings were 0.0 parts per million/volume (ppmv). No evidence of petroleum soil (above the soil/groundwater interface) was observed during drilling.

Groundwater samples collected from wells MW1, MW2, and MW3 were analyzed for gasoline-range TPH, BTEX, and diesel- and oil-range TPH. All groundwater samples were not detected at the analytical laboratory's PQL.

Based on our findings at that time, RGI recommended additional subsurface investigation in an effort to better define the nature and extent of contamination.

Additional Groundwater Investigation (March of 2021)

RGI advanced nine test probes TP7 to TP15 on the Property to depths of up to 30-ft. bgs for soil and groundwater sample collection and laboratory analysis of the COCs. The location of test probes TP7 to TP15 and a summary of the soil and groundwater analytical results are summarized in the attached Figure 2 and Figure 3.

As shown on the attached Figure 2 and 3, the dimensions of the contaminated soil (at the soil/groundwater interface) and contaminated groundwater measured approximately 25 ft. north-south) and approximately 70-ft. east-west. RGI inferred that the footprint (in plan view) of the groundwater contaminant plume area had an approximate dimension of 1,800 square feet (SF).

Soil concentrations at the soil/groundwater interface, within the contaminant plume footprint, ranged from 320 mg/kg (TP10) to 6,600 mg/kg (TP14), Figure 2. BTEX and diesel- and oil-range TPH concentrations were either not detected at the analytical PQL; or had concentrations below their applicable CULs.

Gasoline-range TPH concentrations in groundwater, within the contaminant plume footprint, ranged from 1,100 µg/L (TP13) to 4,100 µg/L (TP14). BTEX and diesel- and oil-range TPH concentrations were either not detected at the analytical PQL; or had concentrations below their applicable CULs.

Based on the findings at that time, RGI recommended that a remedial cleanup action be evaluated and ultimately implemented in an effort to bring soil and groundwater quality underlying the subject Property in accordance with the applicable CULs.

Third Quarter 2021 Groundwater Monitoring Well Report

RGI sampled groundwater from monitoring wells MW1 through MW5 on September 24, 2021. Depth to groundwater ranged from approximately 26-ft. bgs to 28-ft. bgs. The groundwater flow direction underlying the Property is toward the south-southwest, which is consistent with previous groundwater monitoring events.

The location of the groundwater monitoring wells MW1 to MW5 and a summary of the soil and groundwater analytical results are summarized in the attached Figure 4 and Table 3.

Groundwater samples collected from wells MW1, MW2, and MW3 were analyzed for gasoline-range TPH, BTEX, and diesel- and oil-range TPH. All groundwater samples analyzed were not detected at the analytical laboratory's PQL. These three wells were located upgradient and downgradient of the groundwater contaminant plume.

Groundwater samples collected from well MW4 were analyzed for gasoline-range TPH and diesel- and oil-range TPH. Well MW4 had a gasoline-range TPH concentration of 200 µg/L (below the CUL of 1,000 µg/L). BTEX and diesel-and oil-range TPH were not detected at the analytical laboratory PQL.

Groundwater samples collected from well MW5 were analyzed for gasoline-range TPH, full VOCs, diesel- and oil-range TPH, and total and dissolved lead (Pb). Well MW5 had a gasoline-range TPH concentration of 680 µg/L (below the CUL of 1,000 µg/L). Other VOCs, diesel-and oil-range TPH, and dissolved lead were not detected at the analytical laboratory PQL.

Based on our findings at that time, RGI recommended completing two chemical injection events in June and July of 2021 and another quarterly groundwater sampling event in mid- to-late-December of 2021.

PERSULFOX CHEMICAL INJECTION EVENTS (JUNE AND JULY 2021)

Soil and/or groundwater grab samples were collected during the June and/or July of 2021 chemical injection events. Any soil and/or groundwater grab samples collected at an injection point, where collected prior that any actual chemical injections at that point. In addition, no chemical injections were performed at any of the groundwater monitoring wells (MW1 to MW5.

The general scope of work completed during the chemical injection events are described as follows:

- In April of 2021, RGI submitted to Ecology an *Underground Injection Control (UIC) Well Registration Form for Voluntary or Independent Cleanup Sites*. Ecology's letter dated May 6, 2021 approved our proposed remedial action plan that included two chemical injection events totaling approximately 9,367 pounds of PersulfOx (for a total PersulfOx/water mix of approximately 18,700 pounds), with a well depth of 30 feet. The final estimated square footage treatment area was 1,800 square feet.

  The UIC permit also stipulated that down-gradient groundwater wells could not exceed 250,000 µg/L for sulfates.

  These related documents are attached in Appendix B for reference.

- In July of 2021, Ecology (UIC registration) issued a one-page permit addendum dated July 21, 2021 for the second chemical injection event. This related document is attached in Appendix B for reference.

- Two additional groundwater monitoring wells MW4 and MW5 were installed on June 11, 2021 and July 15, 2021, respectively.

- Any soil and/or groundwater grab samples collected for laboratory analysis during the June and July 2021 chemical injections events, at a particular injection point, were always collected prior to any actual chemical injection event at that particular injection point. These additional samples were collected and analyzed in an effort to better define the nature and extent of contamination.

- In June of 2021 and July of 2021, RGI injected a total of approximately 9,367 lbs. of PersulfOx®, or approximately 7,410 pounds of PetroxFix®/water solution, into the petroleum hydrocarbon contaminated water zone as recommended by Regenesis® (a firm that specializes in providing remedial *in-situ* applications). As a result, a total of 39 temporary chemical injection points (IP-1 to IP-39) were installed within the groundwater contaminant plume footprint (see Figures 5 and 6).

UNDERGROUND UTILITY LOCATES

In June and July of 2021, RGI and our utility locating subcontractor (Applied Professional Services) located both metallic and non-conductible underground utilities in the vicinity of the planned groundwater monitoring wells MW-14 and MW-15 wells and the temporary chemical injection point locations (39 of them).

Based on our utility locate findings, no sewer, storm, and other underground utilities were identified in the immediate vicinity of the monitoring well and/or chemical injection locations.

WELL MW4 AND MW5 AND SOIL AND GROUNDWATER SAMPLING RESULTS

Groundwater monitoring wells MW4 and MW5 were installed on June 11, 2021 and July 15, 2021, respectively. Both wells were installed using a Geoprobe 7730 direct push drill rig. Both monitoring wells were completed at a depth of 31-ft. bgs. Wells MW4 and MW5 were both located down-gradient of the groundwater contaminant plume.

Monitoring wells MW4 and MW5 were installed and constructed with 5-ft. of well screen consisting of ¾-inch diameter Geoprobe® pre-sand packed, stainless steel well screen and ¾-inch diameter well casing from top of well screen to near-surface. Wells were completed with a traffic-rated, flush-mount steel monument. Prior to groundwater sampling, wells were developed using ¾-inch diameter bailer (serving as a surge block to remove fines from the well and surrounding native soils). Wells were constructed in accordance with Ecology's Minimum Standards for Construction and Maintenance of Wells Chapter 173-160 WAC). Well logs for MW4 and MW5 are included in Appendix C.

RGI collected four discrete soil samples from MW4 (at approximately 5-ft. sampling depth intervals) for field-screening purposes. The four soil samples were collected above the soil/groundwater interface and screened in the field for VOCs using a portable gas analyzer equipped with a PID. No VOCS were detected.

RGI collected eight discrete soil samples from MW5 at approximately 5-ft. sampling depth intervals for field-screening purposes. The eight soil samples were screened for VOCs using portable gas analyzer equipped with a PID. All soil samples collected above the soil/groundwater interface were not detected for any VOCs.

As reported in previous groundwater monitoring reports:

- Groundwater samples collected from well MW4 were analyzed for the contaminants of concern in June and September of 2021. Gasoline-range TPH concentrations in groundwater ranged from 130 to 200 µg/L (below the CUL of 1,000 µg/L). BTEX and diesel- and oil-range TPH were essentially not detected at the analytical laboratory's PQL.
- Groundwater samples collected from well MW5 were analyzed for the contaminants of concern in September of 2021. Gasoline-range TPH in groundwater was detected at a concentration of 680 µg/L (below CUL of 1,000 µg/L). BTEX and diesel- and oil-range TPH were not detected at the analytical laboratory's PQL.

SUBSURFACE CONDITIONS

Soils encountered beneath the Property consist of loose-to-medium dense sand to a depth of 37-ft. bgs (the maximum depth investigated by RGI).

Depth to groundwater ranged from 26-ft. to 28.5-ft. bgs. Corresponding depth to groundwater elevations ranged from Elevation 12-ft. to 14-ft. above mean sea level (based on NAVD88). Since RGI's site characterization efforts, commenced in 2018, no soil contamination has been encountered above the soil/groundwater interface.

Within the identified groundwater contaminant plume area (approx. defined as a 1,800 square-foot footprint area), petroleum hydrocarbon-contaminated soils have been encountered at the soil/groundwater interface. The vertical thickness of the contaminated soil encountered at the soil/groundwater interface ranges from 0.5-ft. up to 2-ft. In general, the extent of soil contamination encountered at the soil/groundwater interface is 0.5-ft. Only one

location, encountered a 2-ft. horizon of contaminated soil at the soil/groundwater interface (at injection point).

Based on groundwater elevations, groundwater flow direction has consistently been towards the west.

PERSULFOX SELECTION AND DESIGN

RGI reviewed the previous site characterization results, and as a result had frequent correspondence with Regenesis®, a manufacturer of a variety of in-situ remedial products, regarding what their recommended remedial alternative consisted of. Based on their recommendation, PersulfOx chemical injections was to be performed. Based on RGI's subsequent site characterization findings, the estimated area requiring remedial treatment in groundwater was approximately 1,800 SF.

The PersulfOx product (powder-based) is a sodium persulfate-based technology that employs a patented catalyst to enhance the oxidative destruction of hydrocarbons and other contaminants in the subsurface.

Based on Regenesis' design, a total of approximately 190 gallons of the PersulfOx®/water solution was injected per chemical injection point. Water was provided by Excellent Choice Auto (e.g., municipal water supply).

Regenesis recommended that the June of 2021 injection point locations be spaced at approximately 10-ft. on center (where accessible). During the July of 2021 injection event, injection points were spaced in between the prior June of 2021 injection point locations (with means the total distance between points was approximately 5-ft. on center. All injection point screened intervals were installed at depths of approximately 30-ft. to 26-ft. bgs.

In June of 2021, a total of 19 injection points were advanced (1P-1 to 1P-13, IP-14R, IP-15 to IP-17, IP-18R, and IP-19). Injection points IP-14 and IP-18 were not utilized for chemical injections- subsurface soils were difficult to drill due to refusals or extreme soil cave-in/sand heave.

In July of 2021, a total of 20 injection points were advanced (1P-20 to 1P-39).

Following the completion of the chemical injection points, all injection points were properly decommissioned using hydrated bentonite and ready mix-concrete to match existing grade.

CHEMICAL INJECTION EQUIPMENT AND IMPLEMENTATION

RGI setup the equipment necessary to proceed with the 2nd round of chemical injections. The equipment and materials consisted of the following:

- 9,367 pounds of PersulfOx (shipped in approx. 170 55-pound bags).
- Two 220-gallon plastic mixing tanks.
- Forklift for moving totes, equipment, drummed soil and water, and other materials
- Campbell Hausfeld 20-gallon gas compressor (11.5 SCFM at 40 PSI)
- Pumpac PV-10 air diaphragm pump
- 1-inch diameter flex hosing for injection delivery lines
- Tooling and pressure gauges

JUNE AND JULY OF 2021 CHEMICAL INJECTION EVENT AND ADDITIONAL SITE CHARACTERIZATION

RGI installed a total of 39 temporary chemical injection points. Injection points consisted of installing a ¾-inch diameter SCH40 PVC well screen (10 slot) – screened within the groundwater zone. Sand pack was placed around the well screened interval. Hydrated bentonite was placed above the well screen/sand pack. Each installed chemical injection point was allowed at stabilize at least 12 to 24 hours prior to injections (in order to allow the bentonite seal to properly stabilize). The bentonite seal prevented the PersulfOx/water solution from daylighting at the surface – which suggests the PersulfOx/water solution made its way into the upper portion of the soil/groundwater interface.

Injection volumes/injection point was approximately 190 gallons/injection point. Total PersulfOx/water injections was approximately 7,410 gallons.

A summary of the injection point installation dates, compressor operating conditions, volume of product injected/injection point, and other notes are presented in Table 6.

June of 2021: Soil Analytical Results

Prior to and/or in conjunction with the June 2021 chemical injection events, RGI collected a total of 1 discrete soil sample at injection point IP-18 at a depth of 27-ft. bgs – at the soil/groundwater interface (see Figure 5 and Table 4). Note: this sample was collected prior to chemical injections at injection point IP-18.

These selected soil sample was analyzed for gasoline-range TPH/BTEX. Soil sample IP-18 at 27-ft. bgs had a gasoline-range TPH concentration of 530 mg/kg (above the CUL of 100 mg/kg). BTEX was not detected at the analytical laboratory's PQL or had concentrations of TEX below their applicable CULs.

June of 2021: Groundwater Grab Sampling

No groundwater grab samples were collected in conjunction with the June of 2021 chemical injection event.

July of 2021: Soil Analytical Results

Prior to and/or in conjunction with the July 2021 chemical injection events, RGI collected a total of 3 discrete soil samples at injection points IP-22, IP-30, and IP-35. Soil samples were collected at depths ranging from 27-ft. to 28-ft. bgs – at the soil/groundwater interface (see Figure 6 and Table 4). Note: these soil samples were collected prior to any chemical injections.

These soil samples were analyzed for gasoline-range TPH/BTEX. Soil sample IP-22, IP-30, and IP-35 had gasoline-range TPH concentrations ranging from 430 mg/kg to 1,300 mg/kg (above the CUL of 100 mg/kg). Benzene and toluene were not detected at the analytical laboratory's PQL. Ethylbenzene and xylenes concentrations exceeded their respective CULs.

July of 2021: Groundwater Grab Sample Analytical Results

Prior to and/or in conjunction with the July 2021 chemical injection events, RGI collected one groundwater grab sample at injection point IP-39 (see Figure 6 and Table 4). Note: the groundwater grab sample was collected prior to any chemical injection.

This groundwater sample was analyzed for gasoline-range TPH/BTEX. Gasoline-range TPH/BTEX were not detected at the analytical laboratory's PQL.

The groundwater results obtained from IP-39 confirmed the northern extent of the groundwater contaminant plume.

INVESTIGATIVE DERIVED WASTE (IDW)

During the June and July 2021 subsurface investigation activities, drummed waste including personnel protective equipment (PPE), soil cuttings, and decontamination and purge water were generated and stored on the Property pending their removal.

CONCLUSIONS AND RECOMMENDATIONS

RGI successfully completed the PersulfOx chemical injections, as recommended by Regenesis, performed in June and July of 2021. The chemical injections were meant to remediate contaminated groundwater and soil (that is, contaminated soil located at the soil/groundwater interface). No contaminated soils located above the soil/groundwater interface (at approx. 27-ft. bgs) have been encountered to-date.

The chemical injections consisted of 39 injection points (within the footprint of approximately 1,800 SF). Based on our findings to-date, the contaminated groundwater footprint has been defined within the 1,800 SF area of the Property. A total of approximately 9,367 pounds of PersulfOx and 7,410 gallons of water were injected during this project (or approximately 190 gallons PersulfOx/water per injection point). The contaminant groundwater plume is well defined and has not migrated off the Property.

Following the 2021 chemical injection events, RGI recommended quarterly groundwater monitoring for the time being. The quarterly groundwater monitoring events will help evaluate the successfulness of the injection events. As approved by the Client, RGI is in the process of finalizing its 4th Quarter 2021 groundwater monitoring report.

If you have any questions, or need additional information, please contact us at (425) 415-0551.

Sincerely,
THE RILEY GROUP, INC.

Stafford Larsen, GIT
Geologist

Paul D. Riley, LG, LHG
Principal

Report Distribution *Marysville Excellent Choice Auto c/o Mr. Shawn* Rahimzadeh *(PDF)*

Figures

Figure 1. Property Vicinity Map

Figure 2. Summary of Soil Analytical Results up through March of 2021

Figure 3. Test Probe Groundwater Grab Sample Analytical Results up through March of 2021

Figure 4. Monitoring Well Groundwater Analytical Results & Groundwater Flow Direction up through September of 2021

Figure 5. June 2021 Chemical Injection Event and Groundwater Grab Sample Analytical Results

USGS, 2020, Marysville, Washington
7.5-Minute Quadrangle

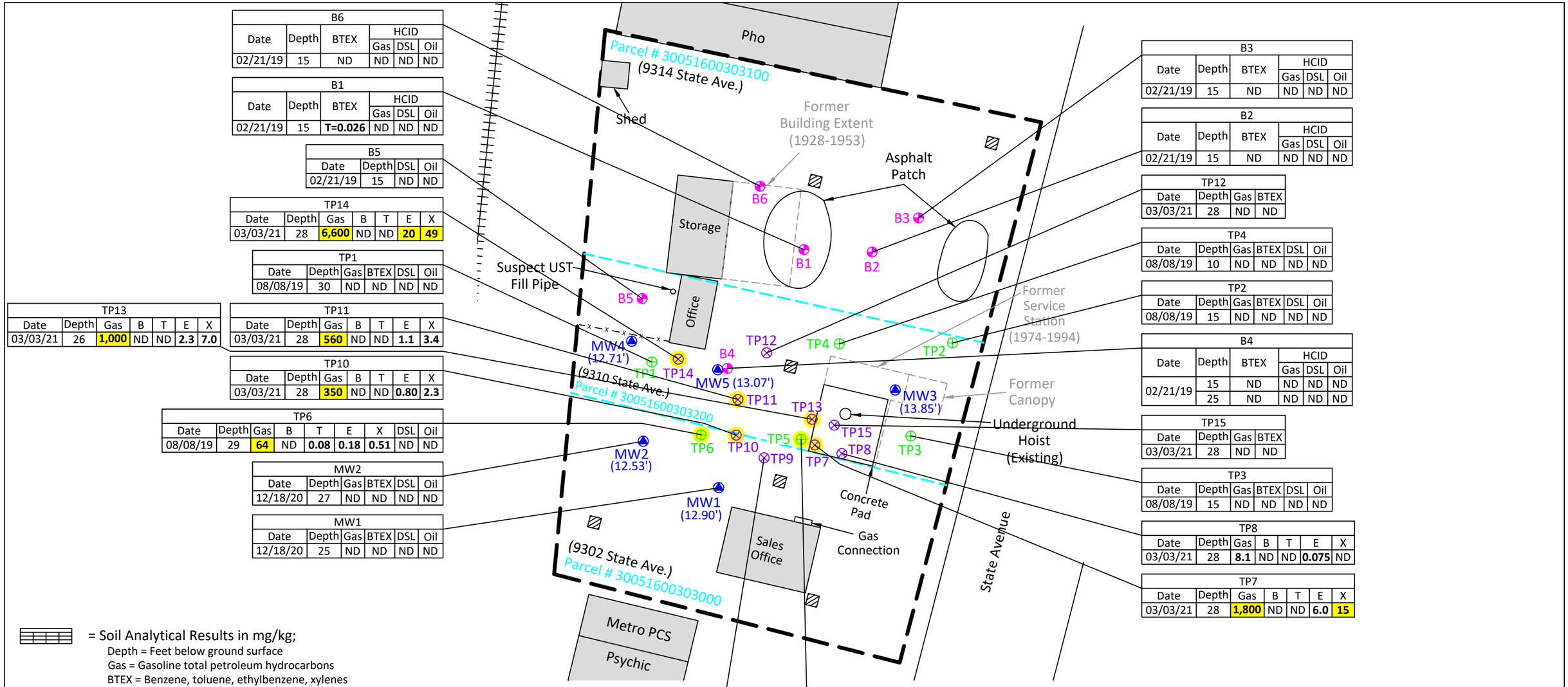
Approximate Scale: 1"=1000'

0 500 1000 2000

N

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure 1
RGI Project Number 2018-244-6	Property Vicinity Map	Date Drawn: 12/2021
Address: 9302 to 9314 State Avenue, Marysville Washington 98270		



B6					
Date	Depth	BTEX	HCID		
			Gas	DSL	Oil
02/21/19	15	ND	ND	ND	ND

B1					
Date	Depth	BTEX	HCID		
			Gas	DSL	Oil
02/21/19	15	**T=0.026**	ND	ND	ND

B5			
Date	Depth	DSL	Oil
02/21/19	15	ND	ND

TP14						
Date	Depth	Gas	B	T	E	X
03/03/21	28	**6,600**	ND	ND	**20**	**49**

TP1					
Date	Depth	Gas	BTEX	DSL	Oil
08/08/19	30	ND	ND	ND	ND

TP13						
Date	Depth	Gas	B	T	E	X
03/03/21	26	**1,000**	ND	ND	**2.3**	**7.0**

TP11						
Date	Depth	Gas	B	T	E	X
03/03/21	28	**560**	ND	ND	**1.1**	**3.4**

TP10						
Date	Depth	Gas	B	T	E	X
03/03/21	28	**350**	ND	ND	**0.80**	**2.3**

TP6								
Date	Depth	Gas	B	T	E	X	DSL	Oil
08/08/19	29	**64**	ND	**0.08**	**0.18**	**0.51**	ND	ND

MW2					
Date	Depth	Gas	BTEX	DSL	Oil
12/18/20	27	ND	ND	ND	ND

MW1					
Date	Depth	Gas	BTEX	DSL	Oil
12/18/20	25	ND	ND	ND	ND

B3					
Date	Depth	BTEX	HCID		
			Gas	DSL	Oil
02/21/19	15	ND	ND	ND	ND

B2					
Date	Depth	BTEX	HCID		
			Gas	DSL	Oil
02/21/19	15	ND	ND	ND	ND

TP12			
Date	Depth	Gas	BTEX
03/03/21	28	ND	ND

TP4					
Date	Depth	Gas	BTEX	DSL	Oil
08/08/19	10	ND	ND	ND	ND

TP2					
Date	Depth	Gas	BTEX	DSL	Oil
08/08/19	15	ND	ND	ND	ND

B4					
Date	Depth	BTEX	HCID		
			Gas	DSL	Oil
02/21/19	15	ND	ND	ND	ND
	25	ND	ND	ND	ND

TP15			
Date	Depth	Gas	BTEX
03/03/21	28	ND	ND

TP3					
Date	Depth	Gas	BTEX	DSL	Oil
08/08/19	15	ND	ND	ND	ND

TP8							
Date	Depth	Gas	B	T	E	X
03/03/21	28	**8.1**	ND	ND	**0.075**	ND

TP7						
Date	Depth	Gas	B	T	E	X
03/03/21	28	**1,800**	ND	ND	**6.0**	**15**

TP9			
Date	Depth	Gas	BTEX
03/03/21	26	ND	ND

TP5															
Date	Depth	Gas	B	T	E	X	DSL	Oil	Naph.	MTBE	Total Metals				
											As	Cd	Cr	Pb	Hg
08/08/19	28	**2,800**	ND	**3.4**	**6.3**	**21**	**63x**	ND	**11.2**	ND	**2.33**	ND	**16.7**	**3.21**	ND

= Soil Analytical Results in mg/kg;

Depth = Feet below ground surface
Gas = Gasoline total petroleum hydrocarbons
BTEX = Benzene, toluene, ethylbenzene, xylenes
DSL/Oil = Diesel/oil total petroleum hydrocarbons
HCID = Hydrocarbon identification
Naph. = Naphthalene
MTBE = Methyl t-butyl ether
As, Cd, Cr, Pb, Hg = Arsenic, cadmium, chromium, lead, mercury
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation. As noted in previous reports, the analytical chemist reported that the diesel concentrations were an overlap of gasoline.
ND = Not detected above laboratory detection limits
Bold results (if any) indicate concentrations above laboratory detection limits
Bold and highlighted results (if any) indicate concentrations above MTCA Method A Soil Cleanup Levels

= Test probe by RGI, 03/03/21
= Groundwater monitoring well by RGI, 2020 & 2021
= Stormwater catch basin
= Test probe by RGI, 08/08/19
= Test Probe by RGI, 02/21/19
= Fence
= Property boundary

Approximate Scale: 1"=40'
0 20 40 80
N

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

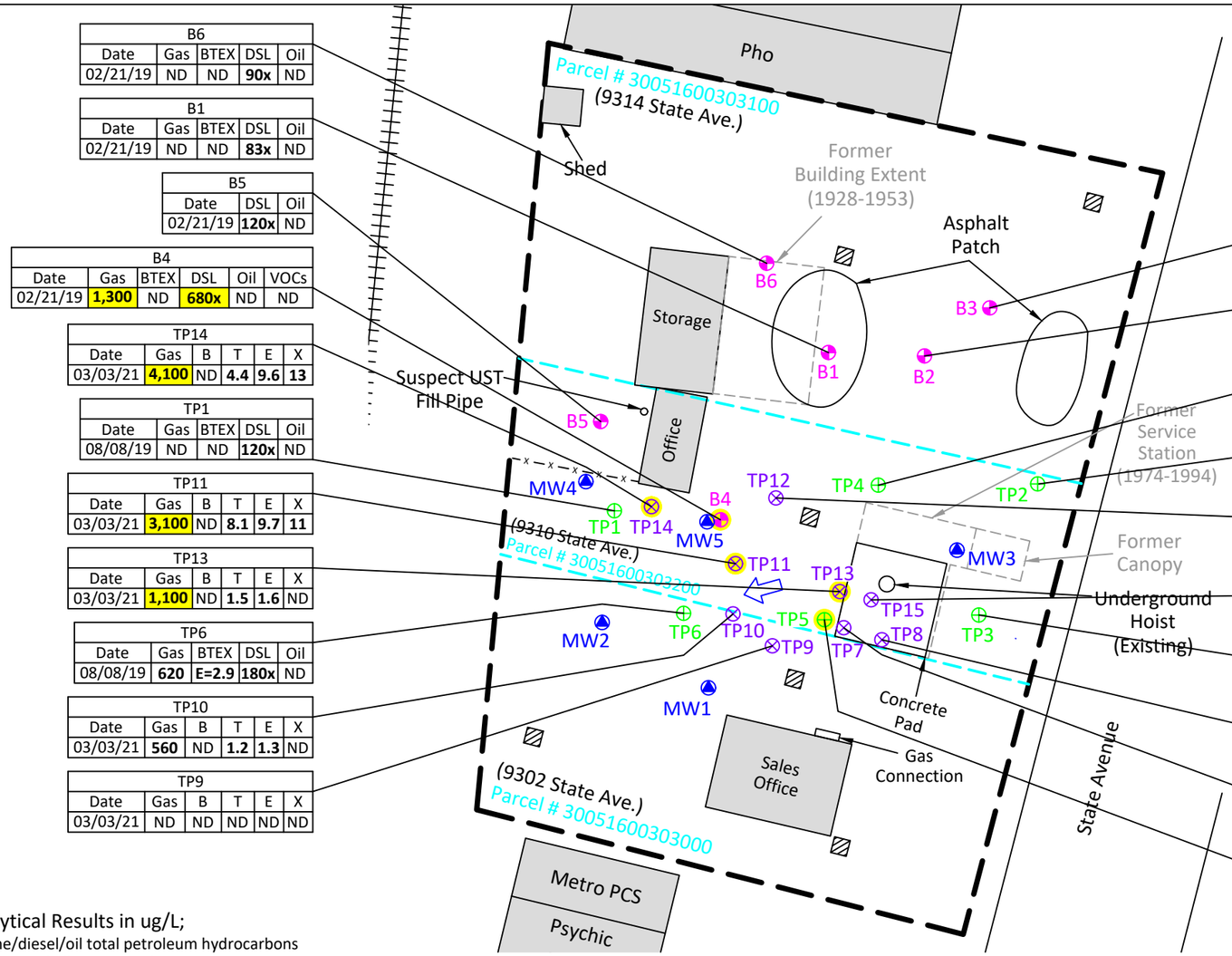
Marysville Excellent Choice Auto Sales | Figure 2

RGI Project Number 2018-244-6

Summary of Soil Analytical Results up through March of 2021

Date Drawn: 12/2021

Address: 9302 to 9314 State Avenue, Marysville Washington 98270



B6				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	**90x**	ND

B1				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	**83x**	ND

B5		
Date	DSL	Oil
02/21/19	**120x**	ND

B4					
Date	Gas	BTEX	DSL	Oil	VOCs
02/21/19	**1,300**	ND	**680x**	ND	ND

TP14					
Date	Gas	B	T	E	X
03/03/21	**4,100**	ND	**4.4**	**9.6**	**13**

TP1				
Date	Gas	BTEX	DSL	Oil
08/08/19	ND	ND	**120x**	ND

TP11					
Date	Gas	B	T	E	X
03/03/21	**3,100**	ND	**8.1**	**9.7**	**11**

TP13					
Date	Gas	B	T	E	X
03/03/21	**1,100**	ND	**1.5**	**1.6**	ND

TP6				
Date	Gas	BTEX	DSL	Oil
08/08/19	**620**	**E=2.9**	**180x**	ND

TP10						
Date	Gas	B	T	E	X	
03/03/21	**560**	ND	**1.2**	**1.3**	ND	

TP9					
Date	Gas	B	T	E	X
03/03/21	ND	ND	ND	ND	ND

B3				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	**70x**	ND

B2				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	**74x**	ND

TP4				
Date	Gas	BTEX	DSL	Oil
08/08/19	**300**	ND	**150x**	ND

TP2				
Date	Gas	BTEX	DSL	Oil
08/08/19	ND	ND	ND	ND

TP12					
Date	Gas	B	T	E	X
03/03/21	**290**	ND	**1.7**	ND	ND

TP15 (hs)				
Date	Gas	BTEX	DSL	Oil
03/03/21	ND	ND	**180x**	ND

TP3				
Date	Gas	BTEX	DSL	Oil
08/08/19	ND	ND	ND	ND

TP8					
Date	Gas	B	T	E	X
03/03/21	ND	ND	ND	ND	ND

TP7					
Date	Gas	B	T	E	X
03/03/21	**120**	ND	**1.1**	ND	ND

TP5							
Date	Gas	BTEX	DSL	Oil	VOCs	Naph.	Total Lead
08/08/19	**1,900**	ND	**190x**	ND	**H=14**	**1.4**	**2.02**

= Groundwater Analytical Results in ug/L;

Gas/DSL/Oil = Gasoline/diesel/oil total petroleum hydrocarbons
BTEX = Benzene, toluene, ethylbenzene, xylenes
VOCs = Volatile organic compounds, H = Hexane
Naph. = Naphthalene
Pb = Lead
hs = Headspace was present in the container used for analysis.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation. As noted in previous reports, the analytical chemist reported that the diesel concentrations were an overlap of gasoline.
ND = Not detected above laboratory detection limits
Bold results (if any) indicate concentrations above laboratory detection limits
Bold and highlighted results (if any) indicate concentrations above MTCA Method A Groundwater Cleanup Levels

= Groundwater flow direction
= Test probe by RGI, 03/03/21
= Groundwater monitoring well by RGI, 2020 - 2021
= Stormwater catch basin
= Test probe by RGI, 08/08/19
= Test probe by RGI, 02/21/19
= Fence
= Property boundary

Approximate Scale: 1"=40'
0 20 40 80
N

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

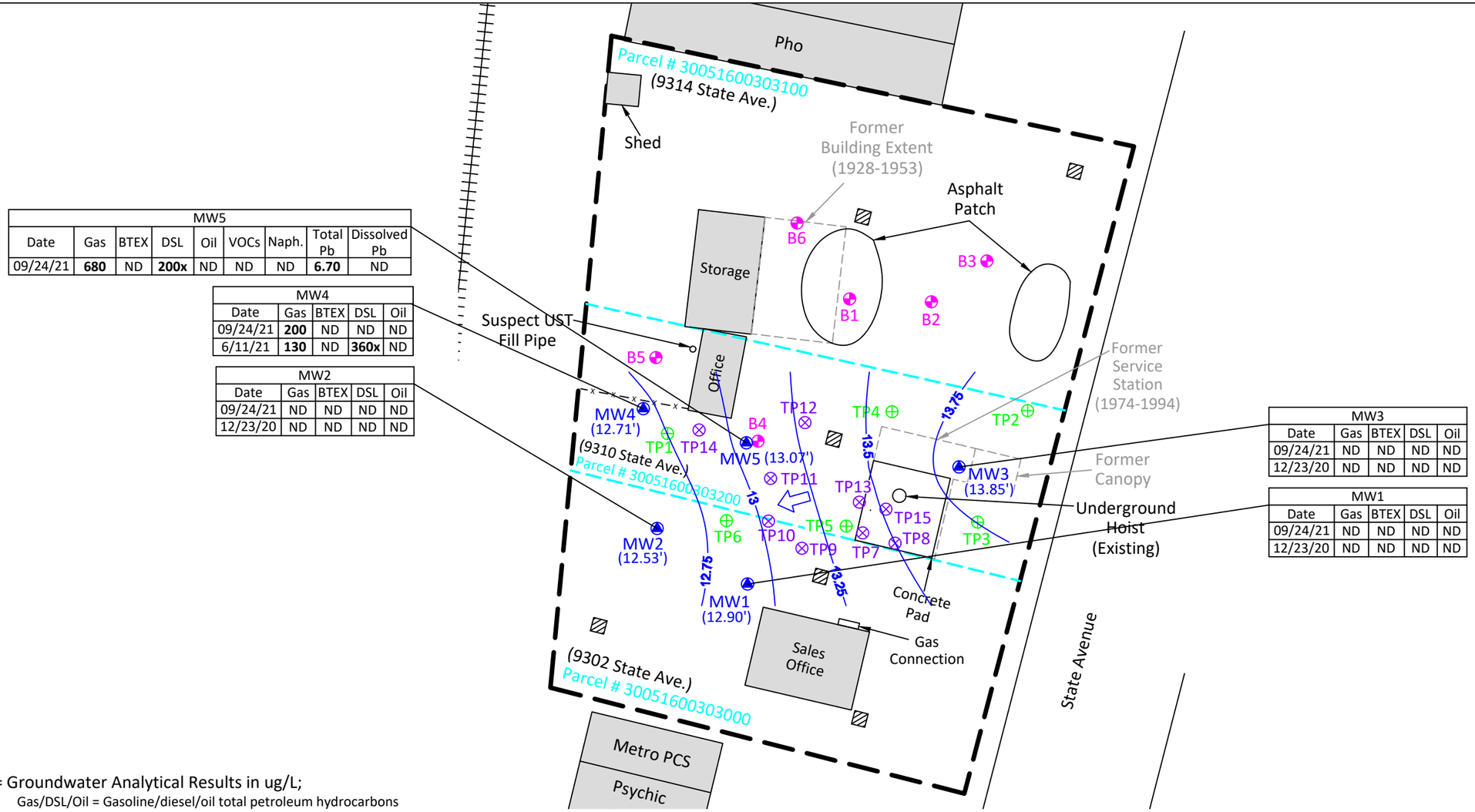
Marysville Excellent Choice Auto Sales | Figure 3

RGI Project Number: 2018-244-6

Test Probe Groundwater Grab Sample
Analytical Results up through March of 2021

Date Drawn: 12/2021

Address: 9302 to 9314 State Avenue, Marysville Washington 98270



MW5								
Date	Gas	BTEX	DSL	Oil	VOCs	Naph.	Total Pb	Dissolved Pb
09/24/21	**680**	ND	**200x**	ND	ND	ND	**6.70**	ND

MW4				
Date	Gas	BTEX	DSL	Oil
09/24/21	**200**	ND	ND	ND
6/11/21	**130**	ND	**360x**	ND

MW2				
Date	Gas	BTEX	DSL	Oil
09/24/21	ND	ND	ND	ND
12/23/20	ND	ND	ND	ND

MW3				
Date	Gas	BTEX	DSL	Oil
09/24/21	ND	ND	ND	ND
12/23/20	ND	ND	ND	ND

MW1				
Date	Gas	BTEX	DSL	Oil
09/24/21	ND	ND	ND	ND
12/23/20	ND	ND	ND	ND

= Groundwater Analytical Results in ug/L;
Gas/DSL/Oil = Gasoline/diesel/oil total petroleum hydrocarbons
BTEX = Benzene, toluene, ethylbenzene, xylenes
VOCs = Volatile organic compounds, H = Hexane
Naph. = Naphthalene
Pb = Lead
hs = Headspace was present in the container used for analysis.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation. As noted in previous reports, the analytical chemist reported that the diesel concentrations were an overlap of gasoline.
ND = Not detected above laboratory detection limits
Bold results (if any) indicate concentrations above laboratory detection limits
Bold and highlighted results (if any) indicate concentrations above MTCA Method A Groundwater Cleanup Levels

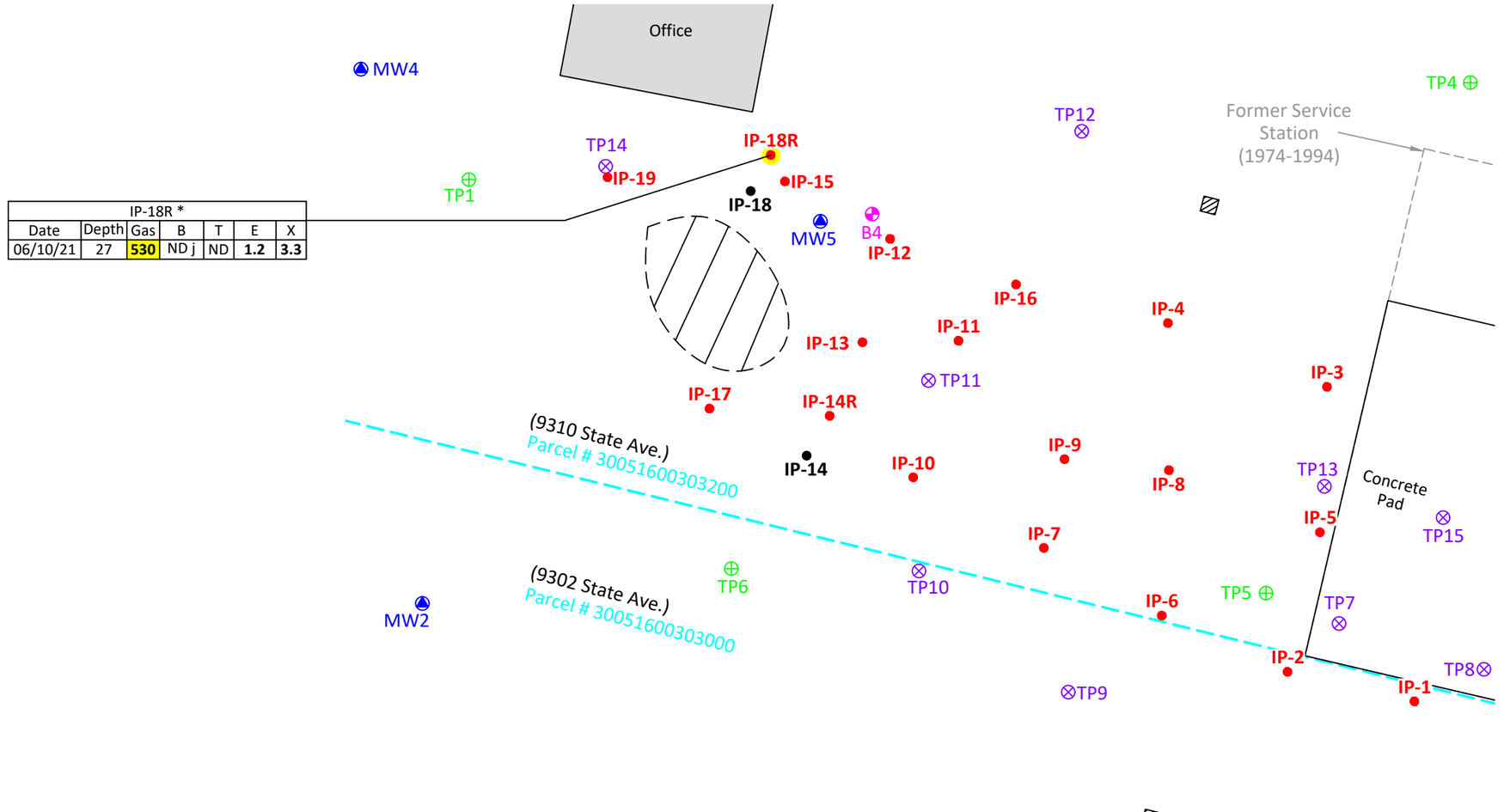
= Groundwater flow direction
= Test probe by RGI, 03/03/21
= Groundwater monitoring well by RGI, 2020 - 2021
= Stormwater catch basin
= Test probe by RGI, 08/08/19
= Test probe by RGI, 02/21/19
= Fence
= Property boundary

= Groundwater contours generated using Surfer Software (based on Kriging method). Contours based on 09/24/21 water level measurements.
(12.53') = Groundwater elevation measured on 09/24/21 by RGI. Groundwater elevations based on NADV 88

Approximate Scale: 1"=40'
0 20 40 80
N

Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure 4
RGI Project Number 2018-244-6	Monitoring Well Groundwater Analytical Results & Groundwater Flow Direction up through September of 2021	Date Drawn: 12/2021
Address: 9302 to 9314 State Avenue, Marysville Washington 98270		



IP-18R *						
Date	Depth	Gas	B	T	E	X
06/10/21	27	**530**	ND j	ND	**1.2**	**3.3**

= Soil Analytical Results in mg/kg (in black); Groundwater Analytical Results in ug/L (in blue - if any);

* = Soil sample collected prior to chemical injections at IP-18R
Depth = Feet below ground surface
Gas = Gasoline total petroleum hydrocarbons (TPH)
BTEX = Benzene, toluene, ethylbenzene, xylenes
DSL/Oil = Diesel/oil TPH
j = The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
x = The sample chromatographic pattern does not resemble the standard used for fuel quantitation.
ND = Not detected above laboratory detection limits
Bold results indicate concentrations above laboratory detection limits
Bold and highlighted results (if any) indicate concentrations above MTCA Cleanup Levels

= Encountered refusal or soil cave-in (unable to complete temp injection point)
= Chemical injection point by RGI, 06/01-10/21 ; ● = Injection point not completed
= Test probe by RGI, 03/03/21
= Groundwater monitoring well by RGI, 2021 - 2021
= Stormwater catch basin
= Test probe by RGI, 08/08/19
= Test probe by RGI, 02/21/19
= Property boundary

Approximate Scale: 1"=10'
0 5 10 20
N

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure 5
RGI Project Number 2018-244-6	June 2021 Chemical Injection Event Soil and Groundwater Grab Sample Analytical Results	Date Drawn: 12/2021
Address: 9302 to 9314 State Avenue, Marysville Washington 98270		

IP39-W (Groundwater)*					
Date	Gas	B	T	E	X
07/14/21	ND	ND	ND	ND	ND

IP-35* (Soil)						
Date	Depth	Gas	B	T	E	X
07/14/21	28	**1,200**	ND	**2.6**	**4.6**	**5.8**

IP-30 * (Soil)						
Date	Depth	Gas	B	T	E	X
07/13/21	27	**1,300**	ND	**3.7**	**8.6**	**12**

IP-22* (Soil)						
Date	Depth	Gas	B	T	E	X
07/12/21	27	**430**	ND	**0.73**	**1.0**	ND

Office

MW4

IP-39

IP-34

IP-38

TP14

IP-35

TP1

IP-30

MW5

B4

IP-37

IP-29

IP-33

IP-36

IP-31

TP11

IP-28

IP-25

IP-23

IP-32

IP-24

IP-22

TP13

IP-27

TP15

TP6

TP10

IP-26

TP5

TP7

MW2

IP-21

IP-20

TP8

TP9

TP12

TP4

Former Service Station (1974-1994)

Concrete Pad

(9310 State Ave.)
Parcel # 30051600303200

(9302 State Ave.)
Parcel # 30051600303000

MW1

= Soil Analytical Results in mg/kg (in black); Groundwater Analytical Results in ug/L (in blue - if any);

* = Soil and groundwater samples collected prior to subsequent chemical injections
Depth = Feet below ground surface
Gas = Gasoline total petroleum hydrocarbons (TPH)
BTEX = Benzene, toluene, ethylbenzene, xylenes
ND = Not detected above laboratory detection limits
Bold results indicate concentrations above laboratory detection limits
Bold and highlighted results (if any) indicate concentrations above MTCA Cleanup Levels

= Encountered refusal or soil cave-in (unable to complete temp injection point)
= Chemical injection point by RGI, 07/12-15/21
= Test probe by RGI, 03/03/21
= Groundwater monitoring well by RGI, 2020 - 2021
= Stormwater catch basin
= Test probe by RGI, 08/08/19
= Test probe by RGI, 02/21/19
= Property boundary

Approximate Scale: 1"=10'

0 5 10 20

N

Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales | Figure 6

RGI Project Number 2018-244-6 | July 2021 Chemical Injection Event Soil and Groundwater Grab Sample Analytical Results | Date Drawn: 12/2021

Address: 9302 to 9314 State Avenue, Marysville Washington 98270

Table 1, Page 1 of 6. Summary of all previous Soil Sample Analytical Laboratory Results up through March of 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Depth	Sample Date	PID	Gasoline	Diesel TPH	Oil TPH	BTEX				HCID			Naph.	MTBE	Total Metals				
							B	T	E	X	Gasoline	Diesel	Heavy Oil			As	Cd	Cr	Pb	Hg
March 2021 Additional Subsurface Investigation																				
TP7-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP7-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP7-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP7-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP7-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP7-27	27	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP7-28	28	03/03/21	153	**1,800**	----	----	ND<1	ND<1	**6.0**	**15**	----	----	----	----	----	----	----	----	----	----
TP7-30	30	03/03/21	0.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP8-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP8-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP8-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP8-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP8-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP8-27	27	03/03/21	0.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP8-28	28	03/03/21	18	**8.1**	----	----	ND<0.02	ND<0.02	**0.075**	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP8-30	30	03/03/21	0.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP9-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP9-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP9-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP9-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP9-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP9-26	26	03/03/21	0.0	ND<5	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP9-30	30	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP10-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP10-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP10-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP10-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP10-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP10-26	26	03/03/21	0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP10-28	28	03/03/21	146	**350**	----	----	ND<0.02 j	ND<0.1	**0.80**	**2.3**	----	----	----	----	----	----	----	----	----	----
TP10-30	30	03/03/21	1.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP11-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP11-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP11-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP11-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses				**100/30[1]**	**2,000**		**0.03**	**7**	**6**	**9**	**100/30[1]**	**2,000**		**5**	**0.1**	**20**	**2**	**19/2,000[2]**	**250**	**2**

Table 1, Page 2 of 6. Summary of all previous Soil Sample Analytical Laboratory Results up through March of 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Depth	Sample Date	PID	Gasoline	Diesel TPH	Oil TPH	BTEX				HCID			Naph.	MTBE	Total Metals				
							B	T	E	X	Gasoline	Diesel	Heavy Oil			As	Cd	Cr	Pb	Hg
TP11-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP11-27	27	03/03/21	0.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP11-28	28	03/03/21	36	**560**	----	----	ND<0.02 j	ND<0.1	**1.1**	**3.4**	----	----	----	----	----	----	----	----	----	----
TP11-30	30	03/03/21	20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP12-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP12-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP12-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP12-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP12-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP12-26	26	03/03/21	0.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP12-28	28	03/03/21	0.5	ND<5	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP12-30	30	03/03/21	0.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP13-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP13-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP13-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP13-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP13-23.5	23.5	03/03/21	0.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP13-26	26	03/03/21	347	**1,000**	----	----	ND<0.4	ND<0.4	**2.3**	**7.0**	----	----	----	----	----	----	----	----	----	----
TP13-27	27	03/03/21	5.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP13-30	30	03/03/21	1.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP14-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP14-7.5	7.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP14-12.5	12.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP14-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP14-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP14-26.5	26.5	03/03/21	0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP14-28	28	03/03/21	355	**6,600**	----	----	ND<0.4	ND<0.4	**20**	**49**	----	----	----	----	----	----	----	----	----	----
TP14-30	30	03/03/21	1.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-2.5	2.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-5.5	5.5	03/03/21	0.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-8	8	03/03/21	0.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-12.5	12.5	03/03/21	0.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-17.5	17.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-22.5	22.5	03/03/21	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-25.5	25.5	03/03/21	0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP15-27	27	03/03/21	107	ND<5	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP15-30	30	03/03/21	0.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses				**100/30[1]**	**2,000**		**0.03**	**7**	**6**	**9**	**100/30[1]**	**2,000**		**5**	**0.1**	**20**	**2**	**19/2,000[2]**	**250**	**2**

Table 1, Page 3 of 6. Summary of all previous Soil Sample Analytical Laboratory Results up through March of 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Depth	Sample Date	PID	Gasoline	Diesel TPH	Oil TPH	BTEX				HCID			Naph.	MTBE	Total Metals				
							B	T	E	X	Gasoline	Diesel	Heavy Oil			As	Cd	Cr	Pb	Hg
December 2020 Monitoring Well Installation																				
MW1-5	5	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW1-10	10	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW1-15	15	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW1-20	20	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW1-25	25	12/18/20	0.0	ND<5	ND<50	ND<250	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
MW1-29	29	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW2-5	5	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW2-10	10	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW2-15	15	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW2-20	20	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW2-25	25	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW2-27	27	12/18/20	0.0	ND<5	ND<50	ND<250	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
MW3-5	5	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW3-10	10	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW3-15	15	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW3-20	20	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW3-25	25	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW3-27	27	12/18/20	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
August 2019 Subsurface Investigation																				
TP1-7	7	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP1-12	12	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP1-19	19	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP1-25	25	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP1-30	30	08/08/19	0.3	ND<5	ND<50	ND<250	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP1-32	32	08/08/19	0.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP2-7	7	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP2-10	10	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP2-15	15	08/08/19	0.1	ND<5	ND<50	ND<250	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP2-20	20	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP2-25	25	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP2-30	30	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP3-5	5	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP3-10	10	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP3-15	15	08/08/19	0.1	ND<5	ND<50	ND<250	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP3-20	20	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP3-27	27	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses				**100/30[1]**	**2,000**		**0.03**	**7**	**6**	**9**	**100/30[1]**	**2,000**		**5**	**0.1**	**20**	**2**	**19/2,000[2]**	**250**	**2**

Table 1, Page 4 of 6. Summary of all previous Soil Sample Analytical Laboratory Results up through March of 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Depth	Sample Date	PID	Gasoline	Diesel TPH	Oil TPH	BTEX				HCID			Naph.	MTBE	Total Metals				
							B	T	E	X	Gasoline	Diesel	Heavy Oil			As	Cd	Cr	Pb	Hg
TP4-5	5	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP4-10	10	08/08/19	0.0	ND<5	ND<50	ND<250	ND<0.02	ND<0.02	ND<0.02	ND<0.06	----	----	----	----	----	----	----	----	----	----
TP4-15	15	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP4-19	19	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP4-24	24	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP4-29	29	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP5-5	5	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP5-10	10	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP5-14	14	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP5-19	19	08/08/19	0.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP5-24	24	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP5-26	26	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP5-28	28	08/08/19	22.5	**2,800**	**63 x**	ND<250	ND<0.02	**3.4**	**6.3**	**21**	----	----	----	**11.2**	ND<0.386	**2.33**	ND<1	**16.7**	**3.21**	ND<1
TP6-5	5	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP6-9	9	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP6-14	14	08/08/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP6-19	19	08/08/19	0.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP6-24	24	08/08/19	0.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP6-27	27	08/08/19	0.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
TP6-29	29	08/08/19	17.6	**64**	ND<50	ND<250	ND<0.02	**0.08**	**0.18**	**0.51**	----	----	----	----	----	----	----	----	----	----
February 2019 Phase II																				
B1-5	5	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B1-10	10	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B1-15	15	02/21/19	0.0	----	----	----	ND<0.02	**0.026**	ND<0.02	ND<0.06	ND<20	ND<50	ND<250	----	----	----	----	----	----	----
B1-20	20	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B1-27	27	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B2-5	5	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B2-15	15	02/21/19	0.0	----	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<20	ND<50	ND<250	----	----	----	----	----	----	----
B2-20	20	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B2-25	25	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B2-27	27	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B2-30	30	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B3-5	5	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B3-10	10	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B3-15	15	02/21/19	0.0	----	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<20	ND<50	ND<250	----	----	----	----	----	----	----
B3-20	20	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B3-25	25	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses				**100/30[1]**	**2,000**		**0.03**	**7**	**6**	**9**	**100/30[1]**	**2,000**		**5**	**0.1**	**20**	**2**	**19/2,000[2]**	**250**	**2**

Table 1, Page 5 of 6. Summary of all previous Soil Sample Analytical Laboratory Results up through March of 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Depth	Sample Date	PID	Gasoline	Diesel TPH	Oil TPH	BTEX				HCID			Naph.	MTBE	Total Metals				
							B	T	E	X	Gasoline	Diesel	Heavy Oil			As	Cd	Cr	Pb	Hg
B3-30	30	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B4-5	5	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B4-10	10	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B4-15	15	02/21/19	0.0	----	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<20	ND<50	ND<250	----	----	----	----	----	----	----
B4-20	20	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B4-25	25	02/21/19	0.0	----	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<20	ND<50	ND<250	----	----	----	----	----	----	----
B4-28	28	02/21/19	3.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B4-30	30	02/21/19	1.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B5-5	5	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B5-10	10	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B5-15	15	02/21/19	0.0	----	ND<50	ND<250	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B5-20	20	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B5-25	25	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B5-28	28	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B6-5	5	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B6-10	10	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B6-15	15	02/21/19	0.0	----	----	----	ND<0.02	ND<0.02	ND<0.02	ND<0.06	ND<20	ND<50	ND<250	----	----	----	----	----	----	----
B6-20	20	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B6-25	25	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B6-28	28	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
B6-30	30	02/21/19	0.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses				**100/30[1]**	**2,000**		**0.03**	**7**	**6**	**9**	**100/30[1]**	**2,000**		**5**	**0.1**	**20**	**2**	**19/2,000[2]**	**250**	**2**

Table 1, Page 6 of 6. Summary of all previous Soil Sample Analytical Laboratory Results up through March of 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Notes:
All results and detection limits are given in milligrams per kilogram (mg/kg); equivalent to parts per million (ppm).
Sample Depth = Soil sample depth interval in feet below ground surface (bgs).
PID = Photoionization detector.
Gasoline TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx.
BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B.
Diesel and Oil TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx.
Gasoline, Diesel, and Oil HCID (hydrocarbon identification) determined using Northwest Test Method NWTPH-HCID.
Naph. (naphthalene) determined using EPA Test Method NWVPH.
MTBE (methyl tert-butyl ether) determined using EPA Test Method NWVPH.
Total Metals (As = Arsenic, Cd = Cadmium, Cr = Chromium, Pb = Lead, Hg = Mercury) determined using EPA Test Method 6020B.

Table 1, Page 6 of 6. Summary of all previous Soil Sample Analytical Laboratory Results up through March of 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Notes Continued:

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation. As noted in previous reports, the analytical chemist reported that the diesel concentrations were an overlap of gasoline.

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

ND = Not detected at noted analytical detection limit.

---- = Not analyzed or not applicable.

Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

[1] The higher cleanup level is allowed if no benzene is present in the gasoline mixture and the total concentration of toluene, ethylbenzene and xylenes is less than 1% of the gasoline mixture.

[2] The higher cleanup level is allowed if no hexavalent chromium (CrVI) is present in the sample.

Bold results indicate concentrations (if any) above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Soil Cleanup Levels.

Table 2. Summary of Groundwater Grab Sample Analytical Laboratory Results up through March 2021.
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Date	Depth to Water (bgs)	Gasoline TPH	VOCs									Diesel TPH	Oil TPH	Total Lead
				B	T	E	X	MTBE	EDC	EDB	Other VOCs	Naph.			
March 2021 Subsurface Investigation															
TP7	03/03/21	27	**120**	ND<1	**1.1**	ND<1	ND<3	----	----	----	----	----	**----**	----	----
TP8	03/03/21	27	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**----**	----	----
TP9	03/03/21	26	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**----**	----	----
TP10	03/03/21	26	**560**	ND<1	**1.2**	**1.3**	ND<3	----	----	----	----	----	**----**	----	----
TP11	03/03/21	27	**3,100**	ND<1	**8.1**	**9.7**	**11**	----	----	----	----	----	**----**	----	----
TP12	03/03/21	26	**290**	ND<1	**1.7**	ND<1	ND<3	----	----	----	----	----	**----**	----	----
TP13	03/03/21	26	**1,100**	ND<1	**1.5**	**1.6**	ND<3	----	----	----	----	----	**----**	----	----
TP14	03/03/21	28	**4,100**	ND<1	**4.4**	**9.6**	**13**	----	----	----	----	----	**----**	----	----
TP15 (hs)	03/03/21	27	**210**	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**180 x**	ND<400	----
August 2019 Subsurface Investigation															
TP1-W	08/08/19	31.5	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**120 x**	ND<330	----
TP2-W	08/08/19	26	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	ND<50	ND<250	----
TP3-W	08/08/19	26	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	ND<60	ND<300	----
TP4-W	08/08/19	27.5	**300**	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**150 x**	ND<250	----
TP5-W	08/08/19	27	**1,900**	ND<0.35	ND<1	ND<1	ND<3	ND<1	ND<1	ND<1	**Hex = 14**	**1.4**	**190 x**	ND<330	**2.02**
TP6-W	08/08/19	28	**620**	ND<1	ND<1	**2.9**	ND<3	----	----	----	----	----	**180 x**	ND<300	----
February 2019 Subsurface Investigation															
B1-W	02/21/19	27	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**83 x**	ND<330	----
B2-W	02/21/19	27	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**74 x**	ND<330	----
B3-W	02/21/19	24	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**70 x**	ND<320	----
B4-W	02/21/19	28	**1,300**	ND<0.35	ND<1	ND<1	ND<3	ND<1	ND<1	ND<1	ND	ND<1	**680 x**	ND<320	----
B5-W	02/21/19	28	----	----	----	----	----	----	----	----	----	----	**120 x**	ND<320	----
B6-W	02/21/19	28	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	----	----	----	**90 x**	ND<350	----
MTCA Method A Cleanup Levels for Ground Water			**800/1,000**[1]	**5**	**1,000**	**700**	**1,000**	**20**	**5**	**0.1**	**Hex = 480**	**5**	**500**	**500**	**15**

Notes:

Samples collected by RGI field staff using a peristaltic pump under low-flow conditions.

Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).

Gasoline TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx.

BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B or 8260C.

MTBE (methyl t-butyl ether), EDC (1,2-dichloroethane), EDB (1,2-dibromoethane), Hex (hexane), other VOCs (volatile organic compounds), and Naph. (naphthalene) determined using EPA Test Method 8260C. Other VOCs were either not detected at the Practical Quantitation Limit (PQL), or had trace concentrations well below the applicable cleanup levels. See Appendix A for laboratory analytical results.

Diesel and Oil TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx .

Total lead determined using EPA Test Method 6020B.

ND = Not detected above the noted analytical detection limit.

---- = Not analyzed or not applicable.

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

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation. As noted in previous reports, the analytical chemist reported that the diesel concentrations were an overlap of gasoline.

Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).

[1] The higher cleanup level is applicable if no benzene is detected in groundwater.

Bold results indicate concentrations (if any) above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceeded MTCA Method A or Cleanup Levels for Ground Water (at the time of sample collection).

Table 3. Summary of Groundwater Monitoring Well Sample Analytical Laboratory Results up through September 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville, Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Date	TOC Elevation	Depth to Water (bgs)	Groundwater Elevation	Gasoline TPH	VOCs						Diesel TPH	Oil TPH	Total Lead	Dissolved Lead
						B	T	E	X	Other VOCs	Naph.				
MW1	Screened Interval 27-37 ft bgs, Total boring depth 37 ft bgs														
MW1	09/24/21	39.59	26.69	12.90	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<50	ND<250	----	----
	12/23/20	39.59	27.20	12.39	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<50	ND<250	----	----
MW2	Screened Interval 27-37 ft bgs, Total boring depth 37 ft bgs														
MW2	09/24/21	40.28	27.75	12.53	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<60	ND<300	----	----
	12/23/20	40.28	28.20	12.08	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<50	ND<250	----	----
MW3	Screened Interval 20-30 ft bgs, Total boring depth 30 ft bgs														
MW3	09/24/21	39.93	26.08	13.85	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<50	ND<250	----	----
	12/23/20	39.93	26.70	13.23	ND<100	ND<1	ND<1	ND<1	ND<3	----	----	ND<50	ND<250	----	----
MW4	Screened Interval 26-31 ft bgs, Total boring depth 31 ft bgs														
MW4	09/24/21	40.75	28.04	12.71	**200**	ND<1	ND<1	ND<1	ND<3	----	----	ND<60	ND<300	----	----
	06/11/21	40.75	27.00	13.75	**130**	ND<1	ND<1	ND<1	ND<3	----	----	**360 x**	ND<250	----	----
MW5	Screened Interval 26-31 ft bgs, Total boring depth 31 ft bgs														
MW5	09/24/21	40.19	27.12	13.07	**680**	ND<0.35	ND<1	ND<1	ND<3	ND	ND<1	**200 x**	ND<250	**6.70**	ND<1
MTCA Method A Cleanup Levels for Ground Water					**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**Analyte Specific**	**160**	**500**	**500**	**15**	**15**

Notes:

Samples collected by RGI field staff using a peristaltic pump under low-flow conditions.

Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).

TOC = Top of casing elevation in feet. Elevation based on NAVD88 datum.

Gasoline TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx.

BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B or 8260D Dual Acquisition.

Other VOCs (volatile organic compounds) and Naph. (naphthalene) determined using EPA Method 8260D Dual Acquisition. Other VOCs were either not detected at the Practical Quantitation Limit (PQL), or had trace concentrations well below the applicable cleanup levels.

Diesel and Oil TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx.

Total Lead and Dissolved Lead determined using EPA Test Method 6020B.

ND = Not detected at a concentration above the analytical detection limit.

---- = Not analyzed or not applicable.

Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).

[1] The higher cleanup level is applicable if no benzene is detected in groundwater.

Bold results indicate concentrations (if any) above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Cleanup Levels for Ground Water.

Table 4. Summary of Soil Sample Analytical Results obtained during the June and July 2021
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

Sample Number	Sample Depth	Sample Date	PID	Gasoline TPH	Diesel TPH	Oil TPH	BTEX			
							B	T	E	X
July 2021 Chemical Injection Event										
IP20-27	27	07/12/21	110	----	----	----	----	----	----	----
IP21-27	27	07/12/21	135	----	----	----	----	----	----	----
IP22-27	27	07/12/21	5,000	**430**	----	----	ND<0.4	**0.73**	**1.0**	ND<1.2
IP23-27	27	07/12/21	0.0	----	----	----	----	----	----	----
IP24-28	28	07/12/21	13.0	----	----	----	----	----	----	----
IP25-27	27	07/12/21	15,000	----	----	----	----	----	----	----
IP26-27	27	07/13/21	700	----	----	----	----	----	----	----
IP27-26	26	07/13/21	5.0	----	----	----	----	----	----	----
IP28-27	27	07/13/21	4.0	----	----	----	----	----	----	----
IP29-27	27	07/13/21	157	----	----	----	----	----	----	----
IP30-27	27	07/13/21	5,000	**1,300**	----	----	ND<0.4	**3.7**	**8.6**	**12**
IP31-28	28	07/13/21	75.0	----	----	----	----	----	----	----
IP32-27	27	07/13/21	5	----	----	----	----	----	----	----
IP33-28	28	07/14/21	5,000	----	----	----	----	----	----	----
IP34-27	27	07/14/21	1.5	----	----	----	----	----	----	----
IP35-28	28	07/14/21	5,000	**1,200**	----	----	ND<0.4	**2.6**	**4.6**	**5.8**
IP36-28	28	07/14/21	77	----	----	----	----	----	----	----
IP37-27	27	07/14/21	21.0	----	----	----	----	----	----	----
IP38-27	27	07/14/21	32	----	----	----	----	----	----	----
IP39-28	28	07/14/21	1.8	----	----	----	----	----	----	----
MW5-28	28	07/15/21	54	----	----	----	----	----	----	----
June 2021 Chemical Injection Event										
IP2-27	27	06/01/21	1,095	----	----	----	----	----	----	----
IP5-28	28	06/03/21	1,135	----	----	----	----	----	----	----
IP6-27	27	06/03/21	1,075	----	----	----	----	----	----	----
IP8-27	27	06/03/21	536	----	----	----	----	----	----	----
IP11-27	27	06/04/21	107	----	----	----	----	----	----	----
IP12-27.5	27.5	06/09/21	89	----	----	----	----	----	----	----
IP13-27.5	27.5	06/09/21	15,000	----	----	----	----	----	----	----
IP13-30	30	06/09/21	0.0	----	----	----	----	----	----	----
IP14R-27	27	06/10/21	1,800	----	----	----	----	----	----	----
IP15-27.5	27.5	06/09/21	3,300	----	----	----	----	----	----	----
IP16-27.5	27.5	06/09/21	3.3	----	----	----	----	----	----	----
IP17-27	27	06/10/21	1,500	----	----	----	----	----	----	----
IP18R-27	27	06/10/21	1,600	**530**	----	----	ND<0.02	ND<0.1	**1.2**	**3.3**
IP19-27	27	06/10/21	1,700	----	----	----	----	----	----	----
MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses				**100/30[1]**	**2,000**		**0.03**	**7**	**6**	**9**

Notes:

All results and detection limits are given in milligrams per kilogram (mg/kg); equivalent to parts per million (ppm).

Sample Depth = Soil sample depth interval in feet below ground surface (bgs). All soil samples collected prior to chemical injections.

PID = Photoionization detector.

Gasoline TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx.

BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B.

Diesel and Oil TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx.

ND = Not detected at noted analytical detection limit.

---- = Not analyzed or not applicable.

Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses (WAC 173-340-900, Table 740-1).

[1] The higher cleanup level is allowed if no benzene is present in the gasoline mixture and the total concentration of toluene, ethylbenzene and xylenes is less than 1% of the gasoline mixture.

Bold results indicate concentrations (if any) above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A Soil Cleanup Levels.

Table 5. Summary of Groundwater Grab Sample Analytical Laboratory Results collected during the July 2021 Chemical Injection Events
Marysville Excellent Choice Auto Sales
9302 to 9314 State Avenue, Marysville Washington 98270
The Riley Group, Inc. Project No. 2018-244-6

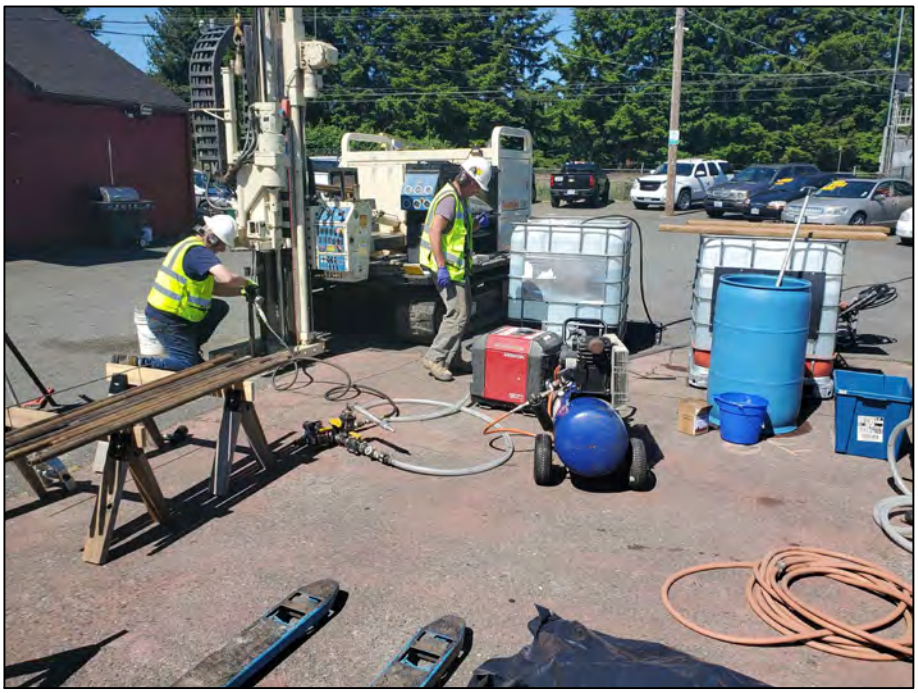
Sample Number	Sample Date	Depth to Water (bgs)	Gasoline TPH	B	T	E	X	Other VOCs	Diesel TPH	Oil TPH
July 2021 Chemical Injection Event										
IP39-W	07/14/21	26.5	ND<100	ND<1	ND<1	ND<1	ND<3	**----**	----	----
MTCA Method A Cleanup Levels for Ground Water			**800/1,000**[1]	**5**	**1,000**	**700**	**1,000**	**----**	**500**	**500**

Notes:
Samples collected by RGI field staff using a peristaltic pump under low-flow conditions and prior to any chemical injections.
Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).
Gasoline TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx
BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B.
Diesel and Oil TPH determined using Northwest Test Method NWTPH-Dx.
ND = Not detected above the noted analytical detection limit.
---- = Not analyzed or not applicable.
Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).
[1] The higher cleanup level is applicable if no benzene is detected in groundwater.
Bold results indicate concentrations (if any) above laboratory detection limits.
Bold and yellow highlighted results indicate concentrations (if any) that exceeded MTCA Method A or Cleanup Levels for Ground Water (at the time of sample collection).

Table 6. Summary of Injection Point Installation Dates and Other Field Parameters/Notes During Chemical PersulfOx Injections
Marysville Excellent Choice Auto Sales
9302 to 90314 State Avenue, Marysville, Washington
The Riley Group, Inc. Project No. 2018-244-6

Injection Point	Injection Point - Date Installed	Approx. Injection Date/Time			Bentonite Seal (Yes/No)	Compressor PSI During Injection	Approx. Gallons of PersulfOx / Water Mix Injected	Back flushed Injection Point (Approx. gallons water)	Notes
		Date	Start	Stop					
IP-1	6/1/2021	6/3/2021	9:00	10:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-2	6/1/2021	6/2/2021	1:00	2:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-3	6/2/2021	6/3/2021	11:00	12:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-4	6/2/2021	6/3/2021	1:00	2:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-5	6/3/2021	6/4/2021	8:00	9:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-6	6/3/2021	6/4/2021	9:00	10:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-7	6/3/2021	6/4/2021	10:00	11:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-8	6/3/2021	6/4/2021	11:00	12:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-9	6/4/2021	6/4/2021	12:00	1:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-10	6/4/2021	6/4/2021	1:00	2:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-11	6/4/2021	6/4/2021	3:00	4:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-12	6/9/2021	6/10/2021	9:00	10:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-13	6/9/2021	6/10/2021	11:00	12:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-14	6/9/2021	----	----	----	----	----	----	----	Encountered refusal or soil cave-in
IP-14R	6/10/2021	6/11/2021	9:00	10:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-15	6/9/2021	6/10/2021	12:00	1:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-16	6/9/2021	6/10/2021	1:00	2:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-17	6/10/2021	6/10/2021	2:00	3:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-18	6/10/2021	----	----	----	----	----	----	----	Encountered refusal or soil cave-in
IP-18R	6/10/2021	6/11/2021	11:00	12:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-19	6/10/2021	6/10/2021	3:00	4:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-20	7/12/2021	7/13/2021	9:00	10:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-21	7/12/2021	7/13/2021	11:00	12:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-22	7/12/2021	7/13/2021	10:00	11:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-23	7/12/2021	7/13/2021	12:00	1:00	Yes	15-20	190	20	No product daylighted at surface during Injections

IP-24	7/12/2021	7/13/2021	1:00	2:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-25	7/12/2021	7/13/2021	2:00	3:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-26	7/13/2021	7/14/2021	9:00	10:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-27	7/13/2021	7/14/2021	10:00	11:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-28	7/13/2021	7/14/2021	11:00	12:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-29	7/13/2021	7/14/2021	12:00	1:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-30	7/13/2021	7/14/2021	1:00	2:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-31	7/13/2021	7/14/2021	2:00	3:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-32	7/13/2021	7/14/2021	3:00	4:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-33	7/14/2021	7/15/2021	9:00	10:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-34	7/14/2021	7/15/2021	10:00	11:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-35	7/14/2021	7/15/2021	11:00	12:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-36	7/14/2021	7/15/2021	12:00	1:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-37	7/14/2021	7/15/2021	1:00	2:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-38	7/14/2021	7/15/2021	2:00	3:00	Yes	15-20	190	20	No product daylighted at surface during Injections
IP-39	7/14/2021	7/15/2021	3:00	4:00	Yes	15-20	190	20	No product daylighted at surface during Injections
Note: All installed Injection Points decommissioned with hydrated bentonite and completed at grade with asphalt patch or ready mix concrete.									



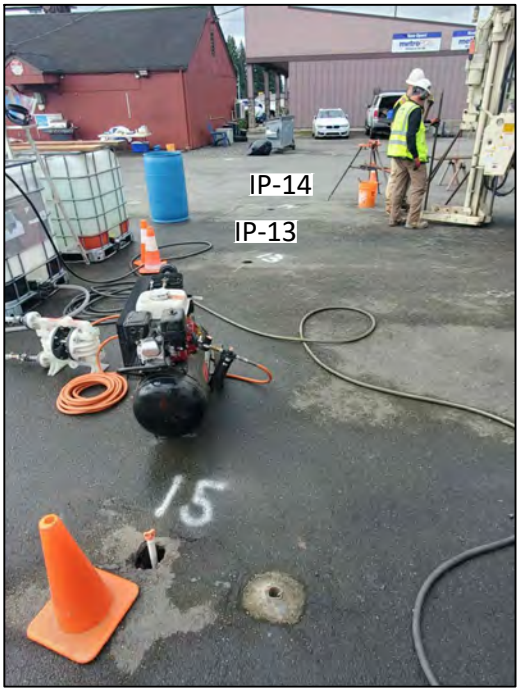
Photograph 1: View of drilling, injection tooling, air diaphragm pump, mixing tanks, rinse drums, electric compressor (later changed to gas compressor), injection manifold, generator, and various hoses and fittings. Photo taken on June 1st, 2021.

Photograph 2: View of chemical (PersulfOx) injection points 1, 6, 7, and 10, looking east. Photo taken on June 4th, 2021.

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure A-1
RGI Project Number 2018-244-6	Property Photographs	Date Drawn: 12/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		

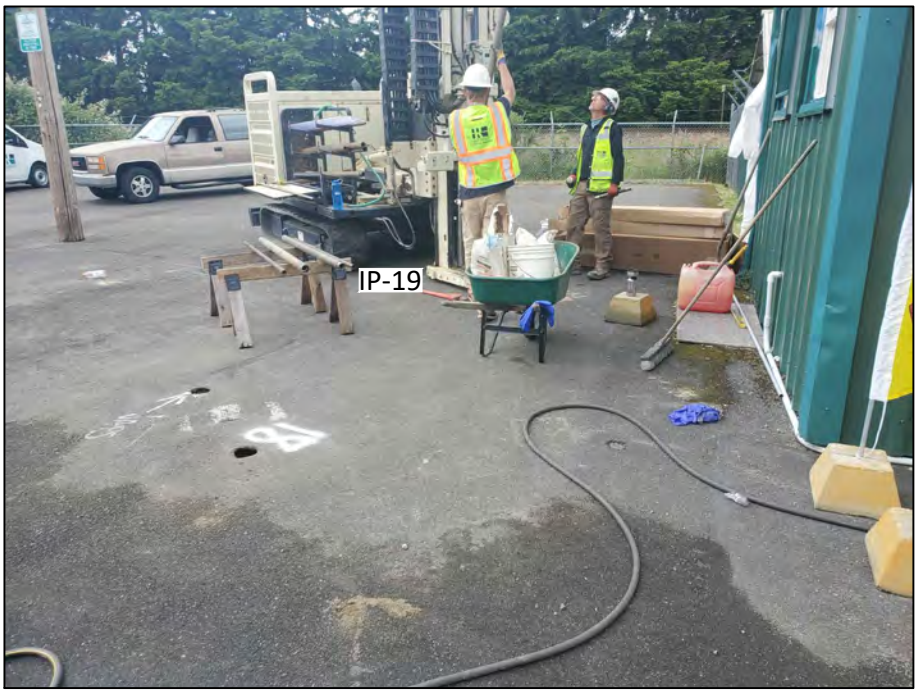
Photograph 3: View of chemical injection points 12, 15, and 16, looking west. Photo taken on June 10th, 2021.



Photograph 4: View of chemical injection points 13, 14, and 15, looking south. Photo taken on June 10th, 2021.

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure A-2
RGI Project Number 2018-244-6	Property Photographs	Date Drawn: 12/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		

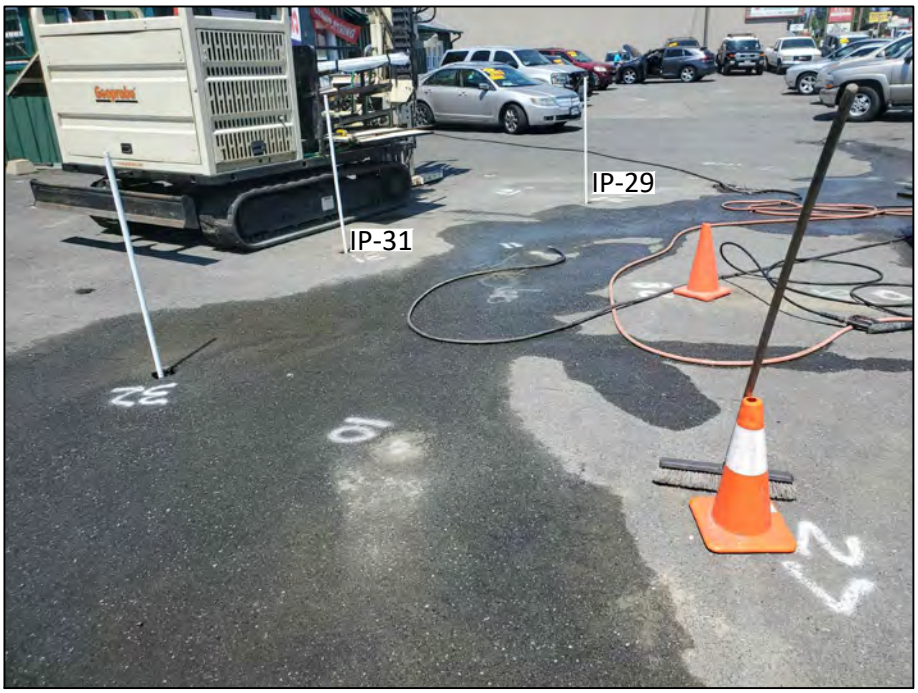


Photograph 5: View of chemical injection points 18 and 19, looking west.

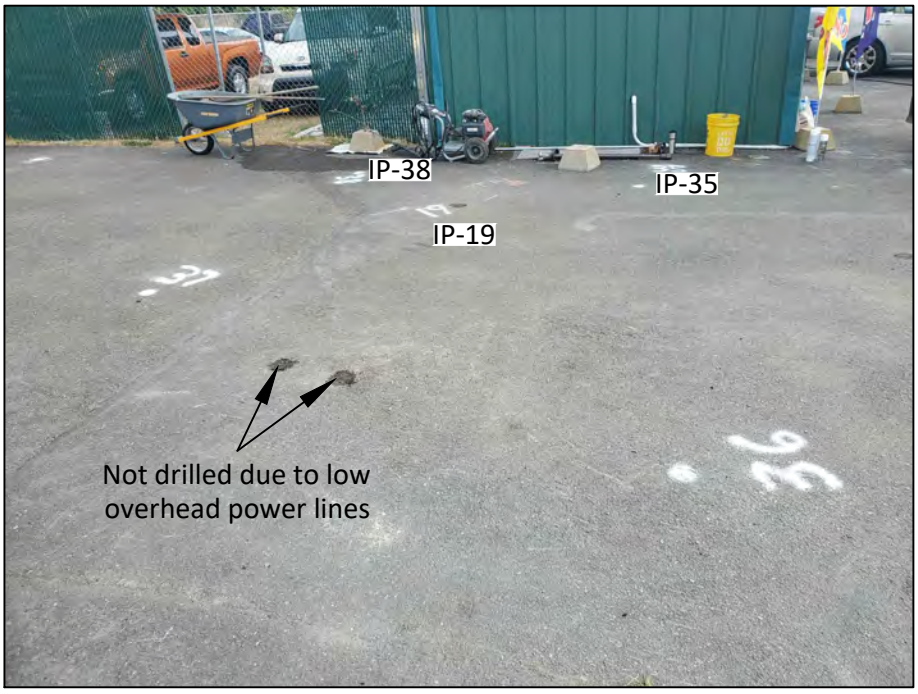
Photograph 6: View of chemical injection points 23 and 25, looking east. Abandoned underground hydraulic hoist visible in concrete slab. Photos taken on July 12th, 2021.

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure A-3
RGI Project Number 2018-244-6	Property Photographs	Date Drawn: 12/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		



Photograph 7: View of chemical injection points 27, 29, 31 and 32, looking North. Photo taken July 13th, 2021.



Photograph 8: View of to-be chemical injection points 35, 36, 37, and 38, looking north. Photo taken on July 14th, 2021

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure A-4
RGI Project Number 2018-244-6	Property Photographs	Date Drawn: 12/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		

Photograph 9: View of chemical injection point 39, looking west. Photo taken on July 14th, 2021.

Photograph 10: View of sandy soils typical to depths of at least 37 feet. Injection point 23 sample shows soils at 5 feet and 10 feet bgs.

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure A-5
RGI Project Number 2018-244-6	Property Photographs	Date Drawn: 12/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		

Photograph 11: View of injection point 24 sandy soils at 28 feet bgs (at soil/groundwater interface). Visible blue-gray contaminated soils readily apparent (approximately 6-inch horizon). Photo taken on July 12th, 2021. The contaminated soil at 28 feet bgs horizon had a PID of 13 ppmv.

Photograph 12: View of injection point 39 sandy soils at 28 feet bgs (at soil/groundwater interface). Visible blue-gray contaminated soils (approximately 6-inch horizon) as shown. Photo taken on July 14th, 2021. Note: The groundwater grab sample collected from injection point 39, prior to any chemical injections, was non-detect for the contaminants of concern. The soil sample collected from the contaminated soil horizon at 28 feet bgs had a relatively low PID reading of 1.8 ppmv.

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure A-6
RGI Project Number 2018-244-6	Property Photographs	Date Drawn: 12/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		

Photograph 13: View of injection point 34 sandy soils at 27 feet bgs (at soil/groundwater interface). Mottled orange and blue-gray contaminated soils (approximately 6-inch horizon) as shown. Photo taken on July 14, 2021. The soil sample collected from the contaminated horizon at 27 feet bgs had a PID reading of 1.5 ppmv.

Photograph 14: View of injection point 31 sandy soils at 28 feet bgs (at the soil/ groundwater interface). Blue-gray contaminated soils (approximately 1-foot horizon) were sampled and had a PID reading of 75 ppmv. Photo taken on July 14th, 2021.

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure A-7
RGI Project Number 2018-244-6	Property Photographs	Date Drawn: 12/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		

Photograph 15: View of injection point 33 sandy soils at 28 feet bgs (at soil/groundwater interface). Blue-gray contaminated soils had a PID reading of 5,000 ppmv. The contaminated soil horizon was approximately 1 foot in length. Photo taken on July 14th, 2021.

Photograph 16: View of injection point 25 sandy soils at 27 feet bgs (at soil/groundwater interface). Blue-gray contaminated soils were sampled and had a PID reading of 15,000 ppmv. Photo taken on July 12th, 2021 The contaminated soil horizon was approximately 2 feet in length (at the soil/groundwater interface).

REGENESIS

PersulfOx® Application Design Summary		
Marysville ECS - Revision I		
Treatment Unit		**Field App. Instructions**
Application Method	**Direct Push**	
Spacing Within Rows (ft)	10	
Spacing Between Rows (ft)	10	
Injection Points (per app.)	**18**	
Number of Applications	**2**	
Areal Extent (square ft)	1,800	**Field Mixing Ratios**
Top Application Depth (ft bgs)	26	Water per Pt per app (gals)
Bottom Application Depth (ft bgs)	30	177
PersulfOx to be Applied (lbs)	**9,367**	PersulfOx per Pt per app (lbs)
PersulfOx Solution %	15%	260
Volume Water (gals)	**6,361**	Total Volume per Pt per app (gals)
Total Volume (gals)	**6,829**	190
Per Application Totals		
PersulfOx per app. (lbs)	*4,684*	*Volume per vertical ft (gals)*
Volume Water per app. (gals)	*3,180*	*47*
Total Volume per app. (gals)	*3,415*	

Technical Notes/Discussion

Assumptions/Qualifications

In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site.

REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the Government.

PersulfOx® Technical Description

PersulfOx is an *In Situ* Chemical Oxidation (ISCO) reagent that destroys organic contaminants found in groundwater and soil through powerful, yet controlled, chemical reactions. A sodium persulfate-based technology (figure 1), PersulfOx employs a patented catalyst to enhance the oxidative destruction of both hydrocarbons and chlorinated contaminants in the subsurface.

Typically, sodium persulfate is activated with the addition of heat, chelated metals, hydrogen peroxide, or base in order to generate sulfate radicals. These activation processes are inherently complex, costly and can pose additional health and safety risks. In comparison, PersulfOx is a relatively safe and easy-to-use ISCO agent with a built-in catalyst which activates the persulfate component, generating contaminant-destroying free radicals without the need for the addition of a separate activator. The equation below shows the net complete oxidation of toluene, a constituent of gasoline, by PersulfOx:

Example of PersulfOx

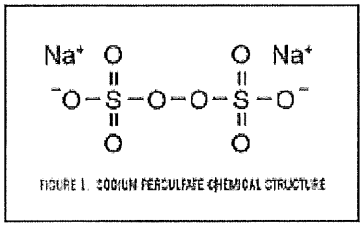


FIGURE 1. SODIUM PERSULFATE CHEMICAL STRUCTURE

For a list of treatable contaminants with the use of PersulfOx, view the Range of Treatable Contaminants Guide

Chemical Composition

- Sodium Persulfate - CAS #7775-27-1
- Sodium Silicate - CAS #1344-09-8

Properties

- pH - 7 to 11.5 at 25°C
- Appearance – White, free-flowing powder, clear to cloudy when mixed with water
- Odor – Not detectable
- Vapor Pressure – None
- Chemical Hazard Classification - Class 5.1 Oxidizer

Storage and Handling Guidelines

Storage

Store locked up

Keep away from heat

Store in a cool, dry place out of direct sunlight

Handling

Minimize dust generation and accumulation

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

PersulfOx® Technical Description

Storage (continued)
Store in original tightly closed container
Store in a well-ventilated place
Do not store near combustible materials
Store away from incompatible materials
Recommended to store at less than 40°C
Provide appropriate exhaust ventilation in places where dust is formed

Handling (continued)
Avoid mixing with combustibles
Avoid contamination
Keep away from clothing and other combustible materials
Wear appropriate personal protective equipment
Avoid breathing dust
Avoid contact with eyes, skin, and clothing
Avoid prolonged exposure
Do not taste or swallow
When using, do not eat, drink or smoke
Wear appropriate personal protective equipment
Wash hands thoroughly after handling
Observe good industrial hygiene practices

Applications

- PersulfOx is mixed with water at a rate of 5% to 20% prior to application.
- For most applications, REGENESIS suggests a 10-15% solution. The resulting mixture has viscosity similar to water.
- Injects into formation through direct push injection points, injection wells or other injection delivery systems.

Application instructions for this product are contained here PersulfOx Application Instructions.

Health and Safety

Material is relatively safe to handle; however, avoid contact with eyes, skin and clothing. OSHA Level D personal protection equipment including: vinyl or rubber gloves, eye protection, and dust mask are recommended when handling this product. Please review the Material Safety Data Sheet for additional storage, usage, and handling requirements here: PersulfOx SDS.

REGENESIS

Technology-Based Solutions for the Environment

Regenesis Bioremediation Products, Inc.
1011 Calle Sombra
San Clemente, CA 92673-6244
Phone: (949) 366-8000
Fax: (949) 366-8090
Email: ar@regenesis.com

INVOICE

Land Science®
a division of REGENESIS®

ENTERED MAY 2 1 2021

Invoice Number: SI08870
Invoice Date: 05/21/2021
Customer Number: C00002067

BILL TO:
The Riley Group
17522 Bothell Way Ne Suite A
Bothell, WA 98011

SHIP TO:
Marysville Excellent Car Care
9302 State Ave
Marysville, WA 98270

REFERENCE #	SHIPPING METHOD	PAYMENT TERMS	DUE DATE	CONFIRM TO
SF # 00031148	SAIA	1.5% DISCOUNT NET 10/N30 1.5% LATE FEE	06/20/2021	PO# 2018-244 Marysville ECA WA - Paul Riley

ITEM #	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
2000	PersulfOx® Bags (55.1 lb) (RBP)	LBS	9367		
FRE001	Freight	EA	1		
				SUBTOTAL	
				Sales Tax	
				TOTAL	

We accept Visa, Mastercard and American Express.

1.5% Discount Net 10 for EFT/ACH/Check payments only. Discount will not be applied for credit card payments.

Credit hold placed on overdue accounts at 60 days.

Remittance Address:
Regenesis Bioremediation Products, Inc.
P.O. BOX 845400
Los Angeles, CA 90084-5400

PAYABLE IN US DOLLARS
Thank you for your business!

2018-244-3	Marysville
RM-5	

Remediation Supplies

REGENESIS
Technology-Based Solutions for the Environment

1011 Calle Sombra
San Clemente, CA 92673
US

2. All quoted rates and delivery dates are based on Standard Delivery Terms, which allow or provide only an estimated date and time of delivery of product to a site. Delivery times will vary per carrier. A Guaranteed Delivery can be arranged for an additional cost and must be place 7 days prior to shipment. Under a Guarantee Delivery, if the product is not delivered per the specified date and time, the carrier will refund some amount up to the full transportation costs associated with the shipment.
3. Shipping /Freight costs are estimates and may change pending requirement of any additional equipment or change in volume or delivery instructions at time of placing order.

SHIPPING DISCLAIMER: Regenesis is not in the business of shipping or transportation of its products. We will strive to assist in meeting shipping requirements, but please realize that all shipments are subject to carrier's availability, weather, mechanical problems, or other unforeseen circumstances. As a result, Regenesis cannot be held responsible for project/site costs incurred due to shipping related problems.
Sales Tax: Sales tax charges are estimated on the quote/ sales confirmations based on delivery location. The actual sales tax rate is calculated at time of invoice. Variations due to, but not limited to county and or local sales tax rates.

Sales Tax: Sales tax charges are estimated on the quote/ sales confirmations based on delivery location. The actual sales tax rate is calculated at time of invoice. Variations due to, but not limited to county and or local sales tax rates.

Resale /Tax Exempt Certificate: A Re-Sales Certificate or Tax Exempt Certificate must be presented to the customer service department at the time an order is placed.

Handling Fee: Handling Fees may be subject to sales tax based on point of delivery.

Freight Freight charges are estimates and actual freight charges are calculated at the time of invoice. Additional freight charges may be assessed for any accessorial requested at the time of delivery. Please communicate any requirements for delivery with the customer service department at the time the order is placed. Standard delivery is between 8am -5pm Monday –Friday. *accessorial – can include, but not limited to lift gate and pallet jack at delivery, inside delivery, time definite deliveries, and delivery appointments.

*Florida Department of Environmental Protection (PRP) Quote valid for 90 days

RegenOx® is a proprietary technology of Regenesis. RegenOx® is an advanced in situ chemical oxidation technology that is composed of two parts, RegenOx® Part A and Part B. RegenOx® Part A is a solid alkaline oxidant that employs a sodium per carbonate complex and RegenOx® Part B is a catalytic component composed of a liquid mixture of sodium silicates, silica gel and ferrous sulfate. When both RegenOx® Part A and Part B are mixed with water and applied to the subsurface, RegenOx® will directly oxidize contaminants while its unique catalytic component generates a range of highly oxidizing free radicals that rapidly and effectively destroy a range of target contaminants. RegenOx® is sold exclusively by Regenesis.

RegenOx PetroCleanze® is a proprietary technology of Regenesis. RegenOx PetroCleanze® is an advanced in situ chemical oxidation technology that is composed of two parts, Part A and Part B. RegenOx PetroCleanze® Part A is a solid alkaline oxidant that employs a sodium percarbonate complex and RegenOx PetroCleanze® Part B is a catalytic component composed of a liquid mixture of sodium silicates, silica gel and ferrous sulfate. When both RegenOx PetroCleanze® Part A and Part B are mixed with water and applied to the subsurface, RegenOx PetroCleanze® will directly oxidize and desorb contaminants while its unique catalytic component generates a range of highly oxidizing free radicals that rapidly and effectively destroy a range of target contaminants. RegenOx PetroCleanze® is sold exclusively by Regenesis.

PersulfOx SP® is a proprietary technology of Regenesis. PersulfOx SP® is an advanced in situ chemical oxidation technology that is composed of sodium persulfate to enhance oxidative destruction of both hydrocarbon and chlorinated contaminants in the subsurface. PersulfOx SP® is sold exclusively by Regenesis.

PersulfOx® is a proprietary technology of Regenesis. PersulfOx® is an advanced in situ chemical oxidation technology that is composed of sodium persulfate which employs a uniquely patented catalyst to enhance oxidative destruction of both hydrocarbon and chlorinated contaminants in the subsurface. PersulfOx® contains a built-in catalyst which activates the persulfate component and generates contaminant destroying free radicals without the need for the addition of a separate activator. PersulfOx® is sold exclusively by Regenesis.

REGENESIS
Technology-Based Solutions for the Environment

1011 Calle Sombra
San Clemente, CA 92673
US

ORC Advanced® is proprietary technology of Regenesis composed of a patented formulation of calcium oxyhydroxide intercalated with phosphate ions that releases 17% of its weight as oxygen. This phosphate intercalation gives ORC Advanced® controlled time-release oxygen properties. The term intercalation refers to the process where phosphates are intimately incorporated in the calcium oxyhydroxide (or any other peroxygen) crystals as they are formed. This phenomenon slows the transmission of water into the structure, controlling the rate of hydration of the crystal and subsequently controlling the rate in which oxygen is released. ORC Advanced® is sold exclusively by Regenesis.

ORC Advanced® Pellets are a proprietary technology of Regenesis composed of a patented formulation of calcium oxyhydroxide intercalated with phosphate ions that releases 17% of its weight as oxygen. This phosphate intercalation gives ORC Advanced® controlled time-release oxygen properties, and the technology is patent-protected in the United States and Europe (e. g: US Patent 5,264,018). The term intercalation refers to the process where phosphates are intimately incorporated in the calcium oxyhydroxide (or any other peroxygen) crystals as they are formed. This phenomenon slows the transmission of water into the structure, controlling the rate of hydration of the crystal and subsequently controlling the rate in which oxygen is released. ORC Advanced® Pellets are sold exclusively by Regenesis.

PlumeStop® is a proprietary technology of Regenesis. PlumeStop® is a liquid activated carbon technology that is composed of very fine particles of activated carbon (1-2 µm) suspended in water through the use of unique organic polymer dispersion chemistry. The unique formulation makes PlumeStop® highly dispersible under low pressure, and once in the subsurface, the material behaves as a colloidal biomatrix. PlumeStop® binds to the aquifer matrix, rapidly removes contaminants from groundwater by sorption, and expedites permanent contaminant biodegradation. PlumeStop® is sold exclusively by Regenesis.

PetroFix™ is a proprietary technology of Regenesis. PetroFix™ is a unique environmental remediation technology developed specifically to treat dissolved hydrocarbon contamination. The material is composed of micron-scale activated carbon particles (approx. 2µm) suspended in water and with a proprietary dispersant and added soluble electron acceptors to biostimulate anaerobic bioremediation. PetroFix™ was developed specifically to be highly dispersible under low pressure and allow for the carbon particles and electron acceptors to flow into and through contaminated aquifer flux zone materials thereby allowing for treatment of contaminant plumes *in situ*. Once in the subsurface the PetroFix activated carbon material permanently attaches to subsurface soil particles and becomes a sorption matrix to rapidly remove dissolved contaminants from groundwater where those contaminants can then be permanently removed by biodegradation.

DEPARTMENT OF
ECOLOGY
State of Washington

May 6, 2021

Shawn Rahimzadeh
Marysville ECA
PO Box 13440
Mill Creek, WA 98082

RE: Registration and rule authorization with the Underground Injection Control (UIC) Program, Marysville Excellent Choice Auto, 9302 State Avenue, Marysville, WA

Dear Shawn Rahimzadeh:

This letter is to acknowledge receipt of your registration form received April 21, 2021 to register with the UIC Program the UIC wells at the above-mentioned site. The project will include:

- Two events to inject a total of approximately 18,700 pounds of PersulfOx mixed with tap water into 36 injection points, with a well depth of 30 feet below ground surface. Onsite groundwater is not approved for use to mix with the remediation products for injection.

- A start date in May 2021.

- Down-gradient groundwater monitoring for sulfate. Sulfate sampling results should not exceed the Water Quality Standards for Groundwaters of the State of Washington, chapter 173-200 WAC (GWQS) criterion of 250 mg/l at monitoring wells located close to the property or plume boundary.

Clean up actions/sites that are not approved by WA State Department of Ecology under the Model Toxics Control Act (MTCA), chapter 70.105D RCW or approved by the United States Environmental Protection Agency under the Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. 9601 et seq are required to meet the GWQS. The injected compounds are intended to improve groundwater quality. There are inherent environmental risks associated with injecting compounds into groundwater. Carefully characterize, manage, and monitor the site to minimize risk and prevent unforeseen degradation of groundwater quality. Mobilized metals or other substances, injected chemicals or hazardous bi-products, are not allowed to migrate beyond the site property boundary.

The two UIC Program requirements for rule authorization are, registration of UIC wells (prior to use) and the discharge from the well must meet the nonendangerment standard, of WAC 173-218-080. The UIC site is number 35760. Listed below are the minimum requirements to meet the

nonendangerment standard. Your site is conditionally rule authorized when the following have been met:

- Meet the GWQS, chapter 173-200-WAC;
- Complete a thorough site characterization including: geologic investigation, concentration and extent of contaminant plume, aquifer characteristics, and location of preferential migration pathways (natural and manmade);
- A groundwater monitoring program that includes: well location and sampling sufficient to characterize the background groundwater quality, the water quality at the point of compliance, and identify any changes in groundwater quality resulting from the injected compounds;
- Develop a conceptual site model that balances the injection rate, concentration, and total mass of injected compound with that of the subsurface oxidizable material. The model should predict the expected changes in groundwater chemistry over time, final groundwater quality at the point of compliance, and predicted restoration timeframe;
- Hydrologically contain within the site property (or plume) boundaries, the injected compounds and any regulated substances mobilized by the injected products;
- Prepare a written contingency plan that describes, in detail, the actions to be taken in case of spills, failures, equipment breakdowns and/or unforeseen environmental degradation caused by the cleanup activities; and,
- Retain all plans, modeling, monitoring results, interim and final reports. Upon request, provide these documents to the Department of Ecology.

If ground water quality does not meet the GWQS at the point of compliance, you must notify the Department of Ecology within 24 hours of discovery.

At any time, the Department of Ecology may require you to apply for and obtain a Waste Discharge Permit for the continued use of these compounds.

A formal approval for this project may be obtained through the departments' State Waste Discharge Permit Program or the MTCA Program.

Please call me at (360) 407-6143 if you have any questions. Additional information on the UIC Program can also be found at our website https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Underground-injection-control-program.

Sincerely,

Mary S-Hansen

Mary Shaleen-Hansen
UIC Coordinator
Water Quality Program

Cc: Paul Riley, The Riley Group, Inc.

Voluntary or Independent Cleanup Sites

For aquifer injection UIC wells at Voluntary or independent cleanup sites.

*****Please ensure to provide the following documents along with your signature page:**

- A site map that includes the location of monitoring wells, UIC wells and the plume, ground water flow direction,
- Drill logs and as-built drawings of monitoring wells.
- Description of the monitoring plan, including the monitoring frequency, list of monitored wells and analytes tested.
- Copy of access agreement if working on neighboring property.

Registration Status

Site Number: 35760
Authorization Status: Pending
Comments:

Facility/Site Information

Facility Name: Marysville Excellent Choice Auto (ECA)
Address: 9302 State Avenue
PO Box/Suite/Building:
City: Marysville
State: WA **ZIP:** 98270
Phone: 425-802-9999
County: Snohomish
Facility Site ID:

Contact Information

Well Owner

Name: Shawn Rahimzadeh
Organization: Marysville ECA
Address: PO Box 13440
PO Box/Suite/Building:
City: Mill Creek
State: WA **ZIP:** 98082
E-mail: shawn@excellentchoiceauto.com
Phone: 425-802-9999

Property Owner

Name: Shawn Rahimzadeh
Organization: Marysville ECA
Address: PO Box 13440
PO Box/Suite/Building:
City: Mill Creek
State: WA **ZIP:** 98082
E-mail: shawn@excellentchoiceauto.com
Phone: 425-802-9999

Technical Contact

Name: Paul Riley
Organization: Riley Group, Inc
Address: 17522 Bothell Way NE
PO Box:
City: Bothell
State: WA **ZIP:** 98011
E-mail: priley@riley-group.com
Phone: 425-415-0551

Voluntary Specific Information

NAIC Code: 441120
SIC Code:
Briefly describe the type or nature of business at this facility: Currently operates as a used car lot. Former site use included gasoline service station.
Briefly describe the overall process: RGI proposes to accelerate the rate of degradation by injecting PersulfOx during two injection events. The injections consist of a total of 9,367 lbs per injection event. Each event will take place approximately 4 weeks from event 1 to event 2. PersulfOx is an In-Situ Chemical Oxidizer (ISCO) reagent which destroys organic

	compounds in groundwater and soil. PersulOx utilizes a patented catalyst to oxidize the contaminants of concern. The PersulfOx will be injected using direct push technology at 18 injection locations for the first event and 18 separate locations for the second event. Injections will be performed during direct push drilling utilizing Geoprobe's Pressure Activated Injection Probe. In general, injection locations will be placed on 10-foot-centers, covering an area of approximately 1,800 square feet. The injection volumes/injection will be metered and applied to the subsurface under low pressure/low flow using an air-powered diaphragm pump.
Depth to ground water:	25
Characterization of the hydrogeology at the site:	Based on the three existing groundwater monitoring wells (MW1, MW2 and MW3) the direction of groundwater flow is primarily to the west-southwest. The gradient is approximately 0.01 feet per foot. The direction of groundwater flow is towards the nearby Quilceda Creek.
Injected products and by products will be contained on the site:	Yes
Description of potential by-products of the process:	Sodium sulfate salts will be left over after the reaction is complete.
Description of existing ground water quality:	Contaminated groundwater located, within a 1,800 square foot area, has gasoline-range total petroleum hydrocarbon (TPH) concentrations above Model Toxics Control Act (MTCA) Method A Cleanup levels of 1,000 ug/L to 4,400 ug/L.
Dept. of Ecology Voluntary or Independent Cleanup Program Site Manager:	Not established
Dept. of Ecology Voluntary or Independent Cleanup Program Site Number:	Not established
Approximately when will the injection project start?	5/2/2021
Approximately when will the injection project end?	9/2/2021
Distance from property line to the nearest surface water (approx. feet):	650
Distance from property line to the nearest drinking water well (approx. feet):	2000
In which drinking water supply wellhead protection area is the site located in?	None

Main Well Information

Well Name	Construction Date	EPA Well Type	Status	Depth of UIC Well (ft.)	Latitude	Longitude
IJ-9	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-8	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-7	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-6	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-5	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-4	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-36	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-35	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-34	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-33	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-32	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-31	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-30	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-3	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080200	-122.175200
IJ-29	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-28	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-27	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-26	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-25	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200

IJ-24	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-23	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-22	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-21	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-20	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-2	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080200	-122.175200
IJ-19	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-18	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-17	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-16	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-15	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-14	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-13	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-12	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-11	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-10	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200
IJ-1	5/2/2021	5B6 - Aquifer remediation	Proposed	30	48.080300	-122.175200

Injectate Information

Well Name	Injection Substance	Mass	Mass Units	Volume	Volume Units	Concentration	Concentration Units
IJ-9	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-8	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-7	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-6	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-5	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-4	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-36	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-35	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-34	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-33	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-32	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-31	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-30	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-3	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-29	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-28	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-27	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-26	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-25	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-24	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-23	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-22	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-21	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-20	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-2	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-19	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-18	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-17	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-16	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-15	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-14	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-13	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-12	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-11	PersulfOx	520	lbs	190	Gallons	2300	ug/L
IJ-10	PersulfOx	520	lbs	190	Gallons	2300	ug/L

IJ-1	PersulfOx	520	lbs	190	Gallons	2300	ug/L

DEPARTMENT OF ECOLOGY
State of Washington

Underground Injection Control (UIC) Well Registration Form for Voluntary or Independent Cleanup Sites

The purpose of this form is to register with the Department of Ecology UIC wells used at voluntary clean up sites that inject products or treated ground water

A. Facility Name and Location

Facility Name: Marysville Excellent Choice Auto (ECA)
Facility Address: 9302 State Avenue
City: Marysville State: WA ZIP: 98270
Phone at the facility: 425 802-9999

County: Snohomish
Township, Range, Section, Quarter-Quarter: 30N, 5E, 16, SW-SW

B. Contact Information

Well Owner

Name: Mr.Shawn Rahimzadeh
Organization: Marysville ECA
Address: P.O. Box 13440
City: Mill Creek State: WA ZIP: 98082
Phone: 425-802-9999
Email: shawn@excellentchoiceauto.com

Property Owner

Same as Well Owner: ☒
If not the same, complete below:
Name:
Organization:
Address:
City: State: ZIP:
Phone:

Technical Contact Person, if applicable (Engineer, Contractor, Consultant)

Name: Paul Riley
Organization: The Riley Group, Inc.
Address: 17522 Bothell Way NE
City: Bothell State: WA ZIP: 98011
Phone: 425-415-0551 ext 322
Email: priley@riley-group.com

Facility Description

List the Primary Standard Industrial Classification Code (SIC) or NAIC Code for your facility (http://www.census.gov/epcd/www/naics.html)

SIC Code: N/A or NAIC Code: N/A

Briefly describe the type or nature of business at this facility:

Currently operates as a used car lot.
Former site use included gasoline service station

C. Site and Project information

The following information is required to determine rule authorization for UIC wells used at a **voluntary clean up site**. Please attach this information with your registration.

1. Describe the overall process. The table in Section E provides a place to list injection substances, amounts by weight, estimated volumes and the estimated maximum concentrations as the substance leaves the injection well. Alternatively, you may attach this information on a separate sheet.
2. Site map including the location of monitoring wells, UIC wells, the plume and ground water flow direction.
3. Drill logs and as-built drawings of monitoring wells.
4. Characterization of the hydrogeology at the site; include the depth to ground water, flow direction and hydraulic gradient.
5. Detailed evaluation of whether injected products and by products will be contained on site or not. Include a brief description of the monitoring plan, include the monitoring frequency, list of monitored wells and analytes tested.
6. Description of potential by-products.
7. Description of existing ground water quality.
8. Copy of access agreement if working on neighboring property

Approximately when will the injection project start?	5/2/2021
Approximately when will the injection project end?	9/2/2021
Distance from property line to nearest of surface water, to the nearest foot:	approx.650 ft. (west to Quilceda Creek - running north-south)
Distance from property line to nearest drinking water well, to the nearest foot:	2,000 ft. to the northwest (3723 98th Street NE)
Which drinking water supply wellhead protection area or source water intake protection area is the site located in (See the Washington State Department of Health website for protection areas in each county: Department of Health wellhead mapping? List the water district or none.	none - site and adjoining properties served by municipal water supply
Dept. of Ecology Voluntary Cleanup Program Site Manager:	Not Established
Dept. of Ecology Voluntary Cleanup Program Site Number	Not Established

C. Site and Project Information (April 16, 2021)

1. Depth to groundwater is at approximately 25 to 26 feet below ground surface (bgs). A summary of the soil and groundwater data are shown on Figures 2 and 3, respectively and are discussed below.
2. Contaminated groundwater located, within a 1,800 square-foot (SF) area, has gasoline-range total petroleum hydrocarbon (TPH) concentrations above the Model Toxics Control Act (MTCA) Method A Cleanup levels of 1,000 µg/L. Gasoline-range TPH elevated concentrations in groundwater have ranged from 1,100 µg/L to 4,400 µg/L.
3. Contaminated soil, located within the 1,800 SF area and with the upper portion of groundwater saturated zone, has elevated concentrations of gasoline-range TPH, ethylbenzene (EB), and xylenes above the Model Toxics Control Act (MTCA) Method A Cleanup levels. Gasoline-range TPH elevated concentrations in soil (within the water bearing zone) have ranged from 260 mg/kg to 6,600 mg/kg.
4. RGI proposes to accelerate the rate of degradation by injecting PersulfOx (manufactured by Regenesis, see attached Regenesis' Application Design Summary and PersulfOx brochure). Two PersulfOx injection events are recommended.
5. The PersulfOx injections consist of a total of 9,367 lbs. per injection event (or 18,734 lbs. including both events). Each injection event will take place approximately 4 weeks from event 1 to event 2. PersulfOx is an In Situ Chemical Oxidizer (ISCO) reagent which destroys organic compounds in groundwater and soil. PersulfOx utilizes a patented catalyst to oxidize the contaminants of concern. The PersulfOx will be injected using direct-push technology at 18 injection locations (IJ-1 to IJ-18) for the first event and 18 injections (IJ-19 to IJ-36) during the second event. Injections will be performed during direct-push drilling utilizing Geoprobe's Pressure Activated Injection Probe (ranging from 10 to 20 PSI). In general, injection locations will be placed on 10-foot-centers, covering an area of approximately 1,800 square feet. The injection volumes/injection point will be metered and applied to the subsurface under low pressure/low flow using an air-powered diaphragm pump. Proposed injection locations are shown on the attached Figures 2 and 3.
6. Existing groundwater monitoring MW1 to MW3 will not be used as injection wells.
7. Soils beneath the site consist of fine to medium sand with some silt to depths of at least 35-ft. bgs.
8. Based on the existing three groundwater monitoring wells (MW1, MW2, and MW3), the direction of groundwater flow is primarily to the west-southwest. The gradient is

approximately 0.01 feet per foot. The direction of groundwater flow is towards the nearby Quilceda Creek.

9. The nearest drinking water well is located approximately 2,000 feet northwest of the site. There are no known drinking water wells located on the subject property or in the immediate vicinity of the subject project area. Therefore, no drinking water wells have been impacted.

10. RGI anticipates two PersulfOx injection events at this time.

E. Other UIC Well Information

	1	2	3	4	5	6	7	8
Well ID Name or Number	IJ-1	IJ-2	IJ-3	IJ-4	IJ-5	IJ-6	IJ-7	IJ-8
Latitude (decimal)	48.0803	48.0802	48.0802	48.0803	48.0803	48.0803	48.0803	48.0803
Longitude (decimal)	-122.1752	-122.1752	-122.1752	-122.1752	-122.1751	-122.1751	-122.1751	-122.1751
Construction Date								
EPA Well Type (see table)	5x26	5x26	5x26	5x26	5x26	5x26	5x26	5x26
Status (Active, Unused, Closed, Proposed)	P	P	P	P	P	P	P	P
Depth of UIC well	30'	30'	30'	30'	30'	30'	30'	30'
Injectate Information (Use this table or attach on a separate sheet)								
Injection substance	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx
Mass								
Mass Units								
Volume[1]	190	190	190	190	190	190	190	190
Volume Units	gallons	gallons	gallons	gallons	gallons	gallons	gallons	gallons
Concentration[2]	2,300	2,300	2,300	2,300	2,300	2,300	2,300	
Concentration Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	

[1] Volume includes water or other liquid that is mixed with the injectate prior to injection.
[2] Estimate what the maximum concentration would be as the substance leaves the injection well.

EPA Class V Well Types

5A19 Cooling Water Return	5A6 Geothermal Heat	5W11 Septic System	
5D2 Stormwater	5R21 Aquifer Recharge	5W20 Industrial Process Water	5X26 Aquifer Remediation
5D4 Industrial Storm Runoff	5W9 Untreated Sewage	5W31 Septic System (well disposal)	5X27 Other Wells
5G30 Special Drainage Water	5W10 Cesspool	5W32 Septic System (drainfield)	5X28 Motor Vehicle Waste

	9	10	11	12	13	14	15
Well ID Name or Number	IJ-9	IJ-10	IJ-11	IJ-12	IJ-13	IJ-14	IJ-15
Latitude (decimal)	48.0803	48.0803	48.0803	48.0803	48.0803	48.0803	48.0803
Longitude (decimal)	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175
Construction Date							
EPA Well Type (see table)	5x26	5x26	5x26	5x26	5x26	5x26	5x26
Status (Active, Unused, Closed, Proposed)	P	P	P	P	P	P	P
Depth of UIC well	30'	30'	30'	30'	30'	30'	30'
Injectate Information (Use this table or attach on a separate sheet)							
Injection substance	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx
Mass							
Mass Units							
Volume[1]	190	190	190	190	190	190	190
Volume Units	gallons	gallons	gallons	gallons	gallons	gallons	gallons
Concentration[2]	2,300	2,300	2,300	2,300	2,300	2,300	2,300
Concentration Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

	16	17	18	19	20	21	22
Well ID Name or Number	IJ-16	IJ-17	IJ-18	IJ-19	IJ-20	IJ-21	IJ-22
Latitude (decimal)	48.0802	48.0802	48.0802	48.0802	48.0802	48.0802	48.0802
Longitude (decimal)	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175
Construction Date							
EPA Well Type (see table)	5x26	5x26	5x26	5x26	5x26	5x26	5x26
Status (Active, Unused, Closed, Proposed)	P	P	P	P	P	P	P
Depth of UIC well	30'	30'	30'				
Injectate Information (Use this table or attach on a separate sheet)							
Injection substance	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx
Mass							
Mass Units							
Volume[1]	190	190	190	190	190	190	190
Volume Units	gallons	gallons	gallons	gallons	gallons	gallons	gallons
Concentration[2]	2,300	2,300	2,300	unknown	unknown	unknown	unknown
Concentration Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

	23	24	25	26	27	28	29
Well ID Name or Number	IJ-23	IJ-24	IJ-25	IJ-26	IJ-27	IJ-28	IJ-29
Latitude (decimal)	48.0802	48.0802	48.0802	48.0802	48.0802	48.0802	48.0802
Longitude (decimal)	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175
Construction Date							
EPA Well Type (see table)	5x26	5x26	5x26	5x26	5x26	5x26	5x26
Status (Active, Unused, Closed, Proposed)	P	P	P	P	P	P	P
Depth of UIC well	30'	30'	30'	30'	30'	30'	30'
Injectate Information (Use this table or attach on a separate sheet)							
Injection substance	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx
Mass							
Mass Units							
Volume[1]	190	190	190	190	190	190	190
Volume Units	gallons	gallons	gallons	gallons	gallons	gallons	gallons
Concentration[2]	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Concentration Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

	30	31	32	33	34	35	36
Well ID Name or Number	IJ-30	IJ-31	IJ-32	IJ-33	IJ-34	IJ-35	IJ-36
Latitude (decimal)	48.0802	48.0802	48.0802	48.0802	48.0802	48.0802	48.0802
Longitude (decimal)	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175	-122.175
Construction Date							
EPA Well Type (see table)	5x26	5x26	5x26	5x26	5x26	5x26	5x26
Status (Active, Unused, Closed, Proposed)	P	P	P	P	P	P	P
Depth of UIC well	30'	30'	30'	30'	30'	30'	30'
Injectate Information (Use this table or attach on a separate sheet)							
Injection substance	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx	PersulfOx
Mass							
Mass Units							
Volume[1]	190	190	190	190	190	190	190
Volume Units	gallons	gallons	gallons	gallons	gallons	gallons	gallons
Concentration[2]	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Concentration Units							

Signature of authorized representative

I hereby certify that the information contained in this registration is true and correct to the best of by knowledge.

Paul Riley	LG, LHG and licensed well driller (No. 2247)
Name of legally authorized representative	Title
	4/16/2021
Signature of legally authorized representative	Date

For Department Use Only	
Site ID:	
Date received:	
Date acknowledged:	
Date Entered:	
Final Disposition:	

Please send completed form to:
UIC Coordinator
Water Quality Program,
Washington Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

If you need this document in a format for the visually impaired, call the Water Quality Program at 360-407-6404. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Instructions for the UIC Well Registration Form for Voluntary Cleanup Site

A. Facility Name and Location

Provide the name, address, and phone number of the facility where the UIC wells are or will be located. Provide the county parcel number for the facility.

B. Contact Information

Well Owner: Provide the well owner's name, organization, address and phone number.
Property Owner: Complete if different then the Well owner

Technical Contact: Provide the name, organization, address, and telephone number of the person to contact in case there are any questions about this registration.

C. Facility Description

SIC or NAIC Codes for your industry or commercial business: Enter the Standard Industrial Classification (SIC) four-digit code **or** North American Industry Classification System five or six-digit code (NAICS) for the facility.

These codes are used to describe the primary activity at the facility that generates the most money and may be found on fire marshal reports, insurance papers, or tax forms. The NAICS codes replaced the SIC system in 1997; however, it is usually easy to convert between the two systems so either code is acceptable. SIC or NAICS information is also available from the U.S. Census Bureau at 1-888-756-2427 or at http://www.naics.com/search.htm. Include a secondary code if applicable.

Briefly describe the type or nature of business at this facility: For example, a gas station, rental business for the home, yard, and contractor equipment with in-house maintenance shop, or retail convenience store.

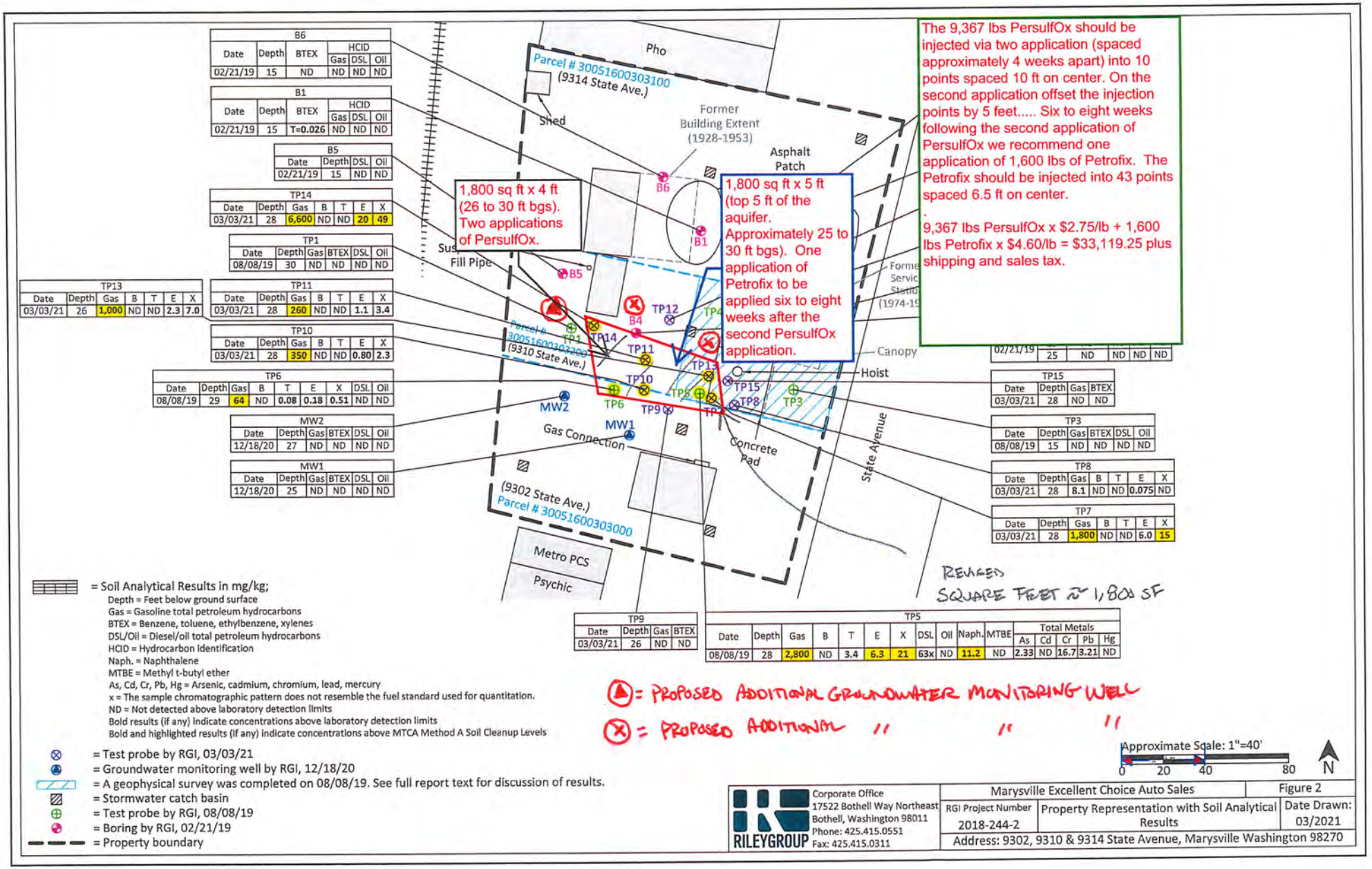
D. Site and Project Information

Provide the answers to questions, section D as an attachment. Some of the questions can be answered in section E. Ecology will contact you if the additional information is needed.

E. Other UIC Well Information

- Well ID: Provide your well identification name or number.
- Latitude and longitude: Enter the latitude and longitude in decimal degrees for each UIC well. Visit http://ww4.doh.wa.gov/scripts/esrimap.dll?Name=geoview&Cmd=Map and type the address in at the bottom of the screen. Locational information including, latitude and longitude will be found in a table below the map.
- Construction Date: Provide the approximate date the well was installed. EPA well type:
- EPA well types are listed in the table 1 below.
- Status: Active if the well is in use; unused if well is not in use, closed, or proposed if the well is in the design phase.
- Well depth: Provide the approximate well depth.
- Injection substance: provide name of product to be injected.
- Provide mass of injected substance and mass units.
- Provide the mass units of the injected substance.
- Provide the volume, volume units, concentration of the injected fluid and the concentration units.

If you need *this document in a format for the visually impaired, call the Water Quality Program at 360-407-6404. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*



The 9,367 lbs PersulfOx should be injected via two application (spaced approximately 4 weeks apart) into 10 points spaced 10 ft on center. On the second application offset the injection points by 5 feet..... Six to eight weeks following the second application of PersulfOx we recommend one application of 1,600 lbs of Petrofix. The Petrofix should be injected into 43 points spaced 6.5 ft on center.

.

9,367 lbs PersulfOx x $2.75/lb + 1,600 lbs Petrofix x $4.60/lb = $33,119.25 plus shipping and sales tax.

REVISED SQUARE FEET = 1,800 SF

B6					
Date	Depth	BTEX	HCID		
			Gas	DSL	Oil
02/21/19	15	ND	ND	ND	ND

B1					
Date	Depth	BTEX	HCID		
			Gas	DSL	Oil
02/21/19	15	T=0.026	ND	ND	ND

B5			
Date	Depth	DSL	Oil
02/21/19	15	ND	ND

TP14						
Date	Depth	Gas	B	T	E	X
03/03/21	28	6,600	ND	ND	20	49

TP1					
Date	Depth	Gas	BTEX	DSL	Oil
08/08/19	30	ND	ND	ND	ND

TP13						
Date	Depth	Gas	B	T	E	X
03/03/21	26	1,000	ND	ND	2.3	7.0

TP11						
Date	Depth	Gas	B	T	E	X
03/03/21	28	260	ND	ND	1.1	3.4

TP10						
Date	Depth	Gas	B	T	E	X
03/03/21	28	350	ND	ND	0.80	2.3

TP6								
Date	Depth	Gas	B	T	E	X	DSL	Oil
08/08/19	29	64	ND	0.08	0.18	0.51	ND	ND

MW2					
Date	Depth	Gas	BTEX	DSL	Oil
12/18/20	27	ND	ND	ND	ND

MW1					
Date	Depth	Gas	BTEX	DSL	Oil
12/18/20	25	ND	ND	ND	ND

TP15			
Date	Depth	Gas	BTEX
03/03/21	28	ND	ND

TP3					
Date	Depth	Gas	BTEX	DSL	Oil
08/08/19	15	ND	ND	ND	ND

TP8						
Date	Depth	Gas	B	T	E	X
03/03/21	28	8.1	ND	ND	0.075	ND

TP7						
Date	Depth	Gas	B	T	E	X
03/03/21	28	1,800	ND	ND	6.0	15

TP9			
Date	Depth	Gas	BTEX
03/03/21	26	ND	ND

TP5															
Date	Depth	Gas	B	T	E	X	DSL	Oil	Naph.	MTBE	Total Metals				
											As	Cd	Cr	Pb	Hg
08/08/19	28	2,800	ND	3.4	6.3	21	63x	ND	11.2	ND	2.33	ND	16.7	3.21	ND

= Soil Analytical Results in mg/kg;
Depth = Feet below ground surface
Gas = Gasoline total petroleum hydrocarbons
BTEX = Benzene, toluene, ethylbenzene, xylenes
DSL/Oil = Diesel/oil total petroleum hydrocarbons
HCID = Hydrocarbon Identification
Naph. = Naphthalene
MTBE = Methyl t-butyl ether
As, Cd, Cr, Pb, Hg = Arsenic, cadmium, chromium, lead, mercury
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
ND = Not detected above laboratory detection limits
Bold results (if any) indicate concentrations above laboratory detection limits
Bold and highlighted results (if any) indicate concentrations above MTCA Method A Soil Cleanup Levels

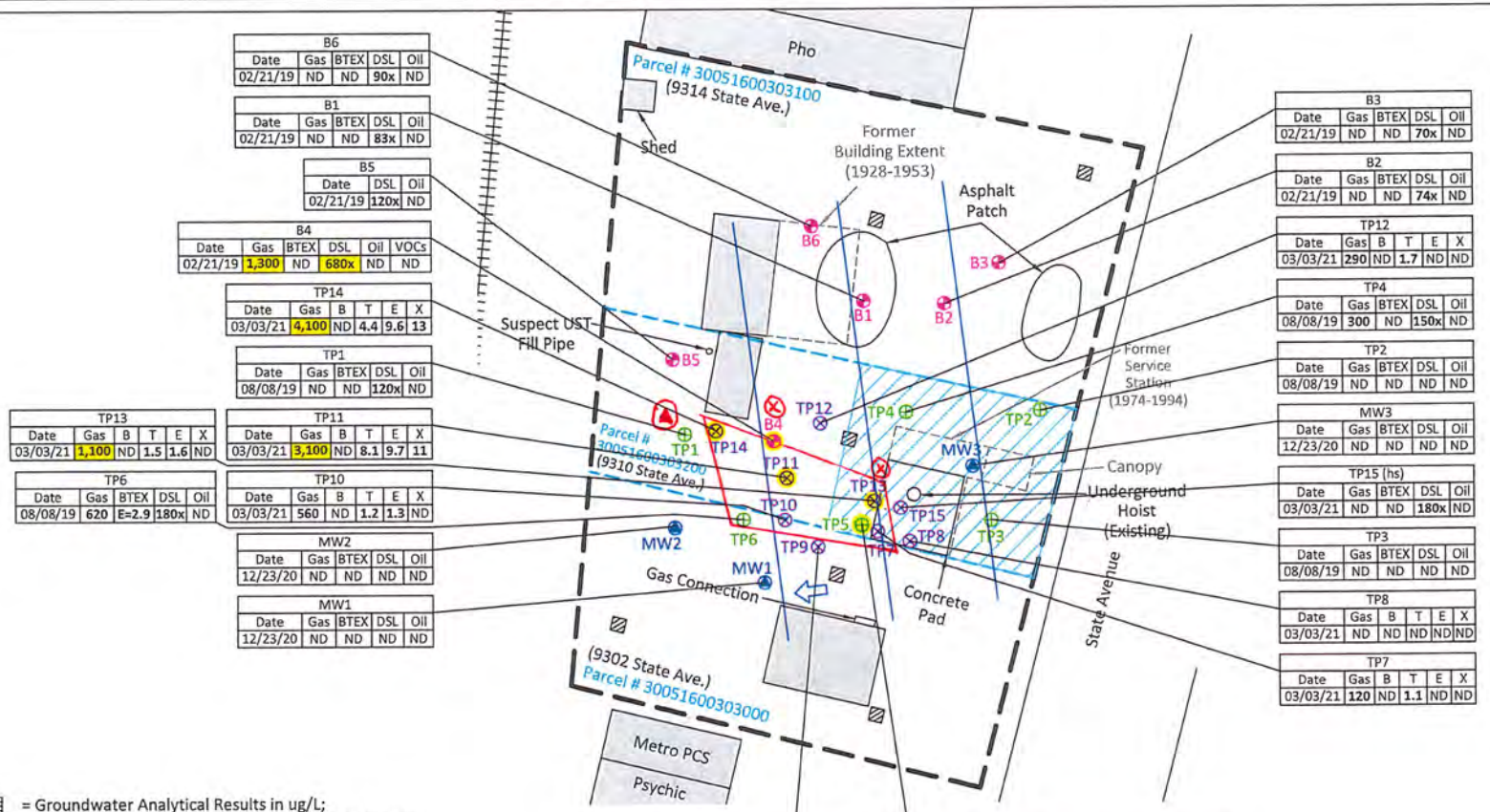
= Test probe by RGI, 03/03/21
= Groundwater monitoring well by RGI, 12/18/20
= A geophysical survey was completed on 08/08/19. See full report text for discussion of results.
= Stormwater catch basin
= Test probe by RGI, 08/08/19
= Boring by RGI, 02/21/19
= Property boundary

= PROPOSED ADDITIONAL GROUNDWATER MONITORING WELL
= PROPOSED ADDITIONAL " " "

Approximate Scale: 1"=40'
0 20 40 80
N

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales | Figure 2
RGI Project Number 2018-244-2 | Property Representation with Soil Analytical Results | Date Drawn: 03/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270



B6				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	90x	ND

B1				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	83x	ND

B5		
Date	DSL	Oil
02/21/19	120x	ND

B4					
Date	Gas	BTEX	DSL	Oil	VOCs
02/21/19	1,300	ND	680x	ND	ND

TP14					
Date	Gas	B	T	E	X
03/03/21	4,100	ND	4.4	9.6	13

TP1				
Date	Gas	BTEX	DSL	Oil
08/08/19	ND	ND	120x	ND

TP13					
Date	Gas	B	T	E	X
03/03/21	1,100	ND	1.5	1.6	ND

TP11					
Date	Gas	B	T	E	X
03/03/21	3,100	ND	8.1	9.7	11

TP6				
Date	Gas	BTEX	DSL	Oil
08/08/19	620	E=2.9	180x	ND

TP10					
Date	Gas	B	T	E	X
03/03/21	560	ND	1.2	1.3	ND

MW2				
Date	Gas	BTEX	DSL	Oil
12/23/20	ND	ND	ND	ND

MW1				
Date	Gas	BTEX	DSL	Oil
12/23/20	ND	ND	ND	ND

B3				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	70x	ND

B2				
Date	Gas	BTEX	DSL	Oil
02/21/19	ND	ND	74x	ND

TP12					
Date	Gas	B	T	E	X
03/03/21	290	ND	1.7	ND	ND

TP4				
Date	Gas	BTEX	DSL	Oil
08/08/19	300	ND	150x	ND

TP2				
Date	Gas	BTEX	DSL	Oil
08/08/19	ND	ND	ND	ND

MW3				
Date	Gas	BTEX	DSL	Oil
12/23/20	ND	ND	ND	ND

TP15 (hs)				
Date	Gas	BTEX	DSL	Oil
03/03/21	ND	ND	180x	ND

TP3				
Date	Gas	BTEX	DSL	Oil
08/08/19	ND	ND	ND	ND

TP8					
Date	Gas	B	T	E	X
03/03/21	ND	ND	ND	ND	ND

TP7					
Date	Gas	B	T	E	X
03/03/21	120	ND	1.1	ND	ND

TP9					
Date	Gas	B	T	E	X
03/03/21	ND	ND	ND	ND	ND

TP5							
Date	Gas	BTEX	DSL	Oil	VOCs	Naph.	Total Lead
08/08/19	1,900	ND	190x	ND	H=14	1.4	2.02

= Groundwater Analytical Results in ug/L;

Gas/DSL/Oil = Gasoline/diesel/oil total petroleum hydrocarbons
BTEX = Benzene, toluene, ethylbenzene, xylenes
VOCs = Volatile organic compounds
H = Hexane
Naph. = Naphthalene
hs = Headspace was present in the container used for analysis.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation. As noted in previous reports, the analytical chemist reported that the diesel concentrations were an overlap of gasoline.
ND = Not detected above laboratory detection limits
Bold results (if any) indicate concentrations above laboratory detection limits
Bold and highlighted results (If any) indicate concentrations above MTCA Method A Groundwater Cleanup Levels

= Test probe by RGI, 03/03/21
= Groundwater monitoring well by RGI, 12/18/20
= A geophysical survey was completed on 08/08/19. See full report text for discussion of results.
= Stormwater catch basin
= Test probe by RGI, 08/08/19
= Boring by RGI, 02/21/19
= Property boundary

= See Figure 2
= See Figure 2

Approximate Scale: 1"=40'
0 20 40 80
N

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Marysville Excellent Choice Auto Sales		Figure 3
RGI Project Number 2018-244-2	Property Representation with Groundwater Analytical Results	Date Drawn: 03/2021
Address: 9302, 9310 & 9314 State Avenue, Marysville Washington 98270		

REGENESIS

PersulfOx® Application Design Summary

Marysville ECS - Revision I

Treatment Unit		Field App. Instructions
Application Method	**Direct Push**	
Spacing Within Rows (ft)	10	
Spacing Between Rows (ft)	10	
Injection Points (per app.)	**18**	
Number of Applications	**2**	
Areal Extent (square ft)	1,800	**Field Mixing Ratios**
Top Application Depth (ft bgs)	26	Water per Pt per app (gals)
Bottom Application Depth (ft bgs)	30	177
PersulfOx to be Applied (lbs)	**9,367**	PersulfOx per Pt per app (lbs)
PersulfOx Solution %	15%	260
Volume Water (gals)	**6,361**	Total Volume per Pt per app (gals)
Total Volume (gals)	**6,829**	190
Per Application Totals		
PersulfOx per app. (lbs)	*4,684*	*Volume per vertical ft (gals)*
Volume Water per app. (gals)	*3,180*	*47*
Total Volume per app. (gals)	*3,415*	

Technical Notes/Discussion

Assumptions/Qualifications

In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site.

REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the Government.

PersulfOx® Technical Description

PersulfOx is an *In Situ* Chemical Oxidation (ISCO) reagent that destroys organic contaminants found in groundwater and soil through powerful, yet controlled, chemical reactions. A sodium persulfate-based technology (figure 1), PersulfOx employs a patented catalyst to enhance the oxidative destruction of both hydrocarbons and chlorinated contaminants in the subsurface.

Typically, sodium persulfate is activated with the addition of heat, chelated metals, hydrogen peroxide, or base in order to generate sulfate radicals. These activation processes are inherently complex, costly and can pose additional health and safety risks. In comparison, PersulfOx is a relatively safe and easy-to-use ISCO agent with a built-in catalyst which activates the persulfate component, generating contaminant-destroying free radicals without the need for the addition of a separate activator. The equation below shows the net complete oxidation of toluene, a constituent of gasoline, by PersulfOx:

Example of PersulfOx

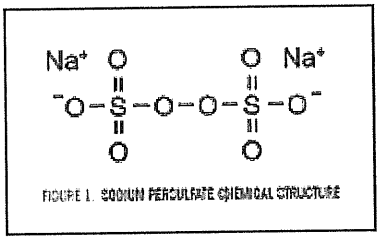


FIGURE 1. SODIUM PERSULFATE CHEMICAL STRUCTURE

For a list of treatable contaminants with the use of PersulfOx, view the Range of Treatable Contaminants Guide

Chemical Composition

- Sodium Persulfate - CAS #7775-27-1
- Sodium Silicate - CAS #1344-09-8

Properties

- pH - 7 to 11.5 at 25°C
- Appearance – White, free-flowing powder, clear to cloudy when mixed with water
- Odor – Not detectable
- Vapor Pressure – None
- Chemical Hazard Classification - Class 5.1 Oxidizer

Storage and Handling Guidelines

Storage

Store locked up

Keep away from heat

Store in a cool, dry place out of direct sunlight

Handling

Minimize dust generation and accumulation

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

PersulfOx® Technical Description

Storage (continued)
Store in original tightly closed container
Store in a well-ventilated place
Do not store near combustible materials
Store away from incompatible materials
Recommended to store at less than 40°C
Provide appropriate exhaust ventilation in places where dust is formed

Handling (continued)
Avoid mixing with combustibles
Avoid contamination
Keep away from clothing and other combustible materials
Wear appropriate personal protective equipment
Avoid breathing dust
Avoid contact with eyes, skin, and clothing
Avoid prolonged exposure
Do not taste or swallow
When using, do not eat, drink or smoke
Wear appropriate personal protective equipment
Wash hands thoroughly after handling
Observe good industrial hygiene practices

Applications

- PersulfOx is mixed with water at a rate of 5% to 20% prior to application.
- For most applications, REGENESIS suggests a 10-15% solution. The resulting mixture has viscosity similar to water.
- Injects into formation through direct push injection points, injection wells or other injection delivery systems.

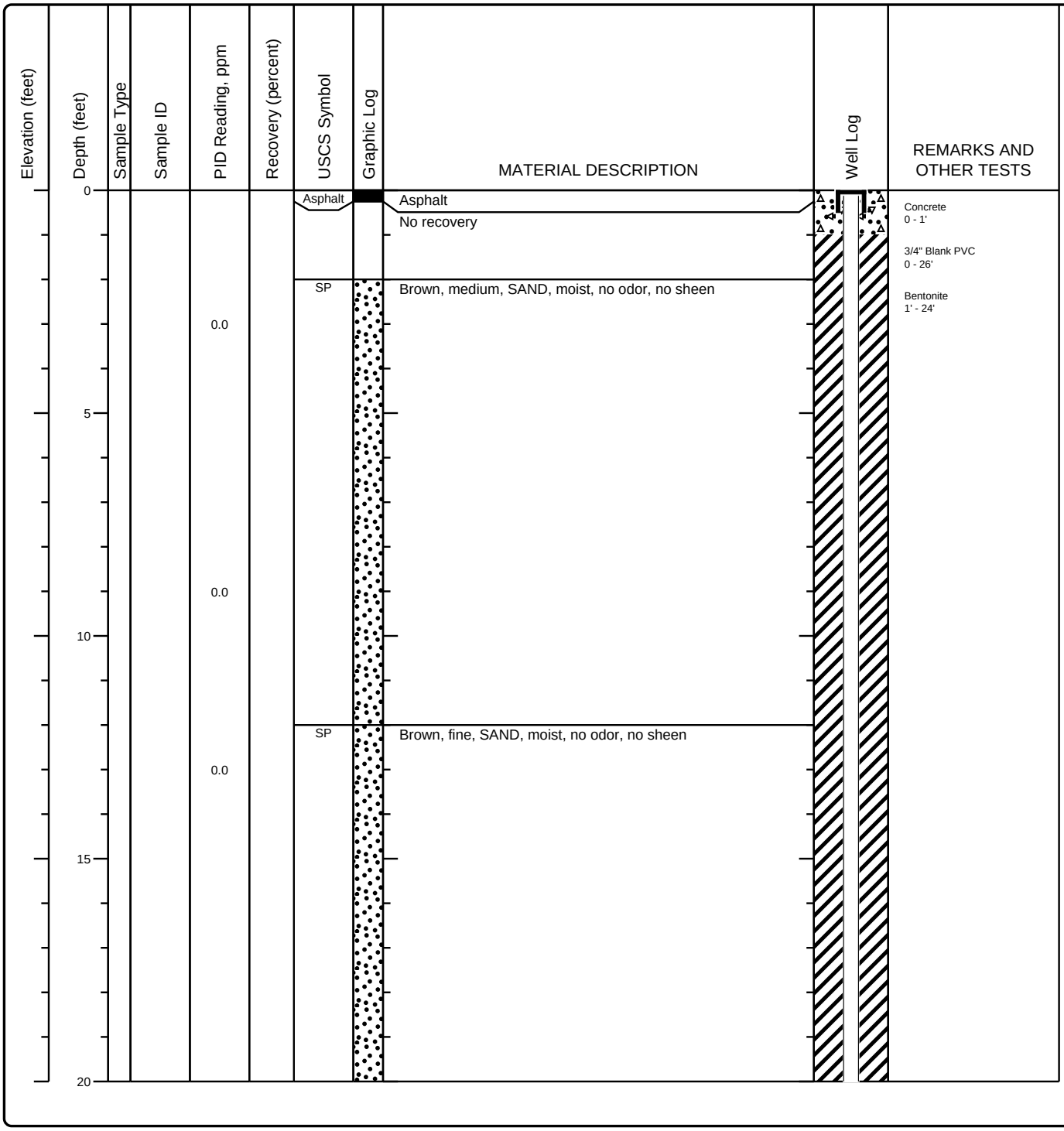
Application instructions for this product are contained here PersulfOx Application Instructions.

Health and Safety

Material is relatively safe to handle; however, avoid contact with eyes, skin and clothing. OSHA Level D personal protection equipment including: vinyl or rubber gloves, eye protection, and dust mask are recommended when handling this product. Please review the Material Safety Data Sheet for additional storage, usage, and handling requirements here: PersulfOx SDS.

Project Name: **Marysville Excellent Choice Auto Sales** Project Number: **2018-244-6** Client: **Excellent Choice Auto Sales**	Well No.: **MW4 (BKZ 241)** **Sheet 1 of 2**

Date(s) Drilled: **06/11/21**	Logged By: **SL**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2.25"**	Total Depth of Borehole: **31 feet bgs**
Drill Rig Type: **Geoprobe 7730 DT**	Drilling Contractor: **RGI**	Approximate Surface Elevation (feet amsl): **n/a**
Groundwater Level and Date Measured: **27'**	Sampling Method(s):	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **9302, 9310 & 9314 State Avenue, Marysville, Washington 98270**	



The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

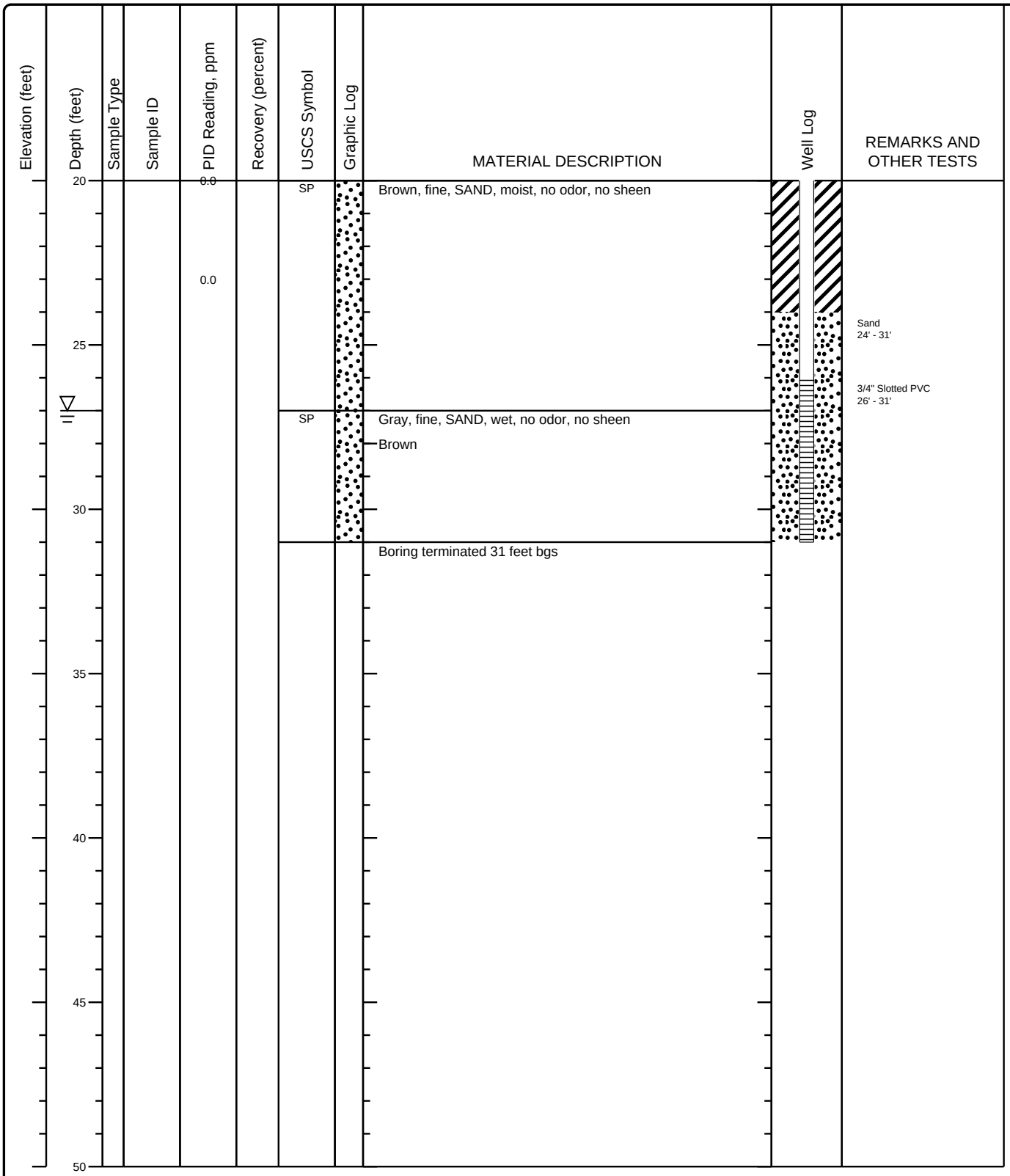
Project Name: **Marysville Excellent Choice Auto Sales**

Project Number: **2018-244-6**

Client: **Excellent Choice Auto Sales**

Well No.: **MW4 (BKZ 241)**

Sheet 2 of 2

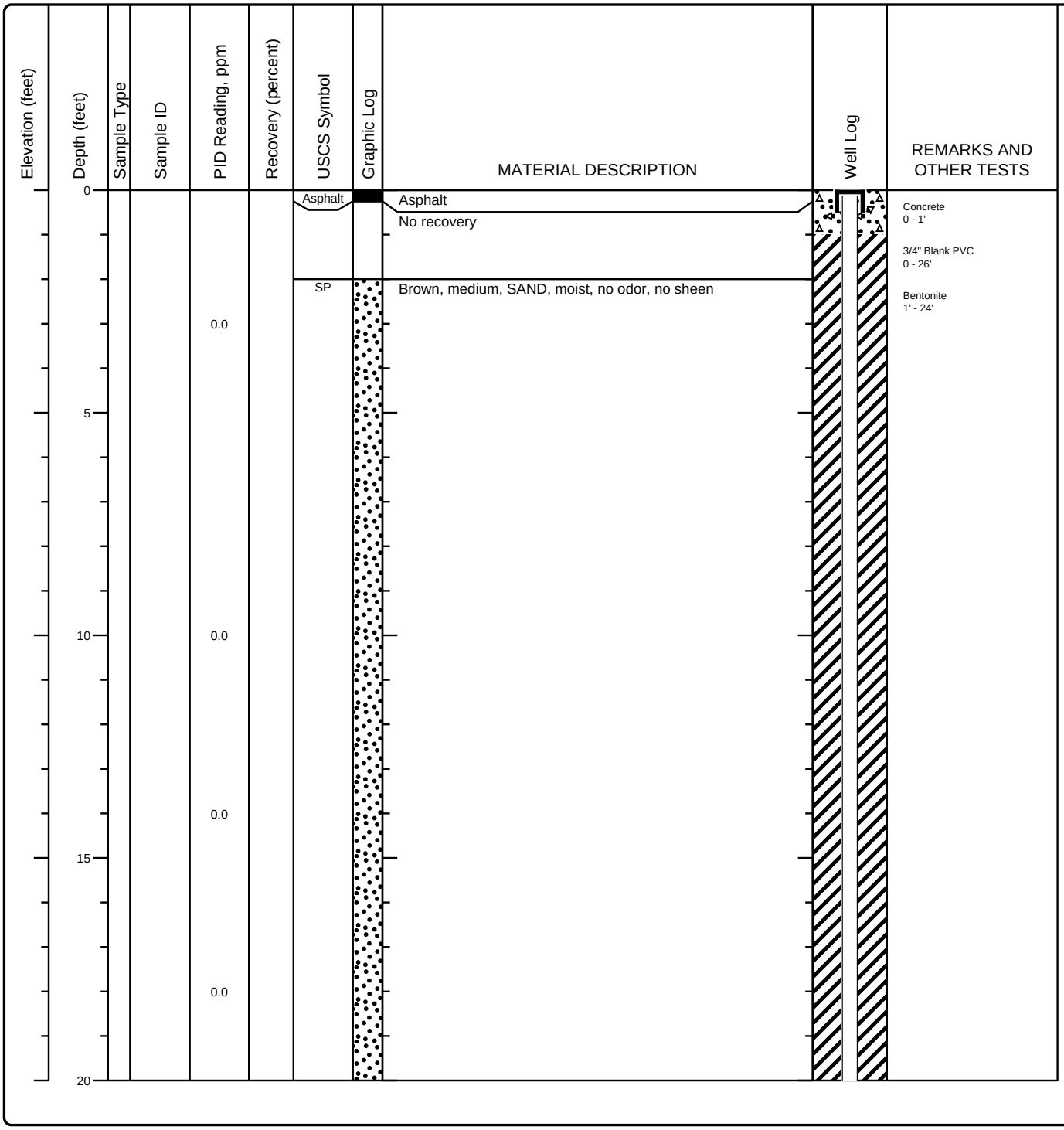


The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **Marysville Excellent Choice Auto Sales**
Project Number: **2018-244-6**
Client: **Excellent Choice Auto Sales**

Well No.: **MW5 (BKZ 242)**
Sheet 1 of 2

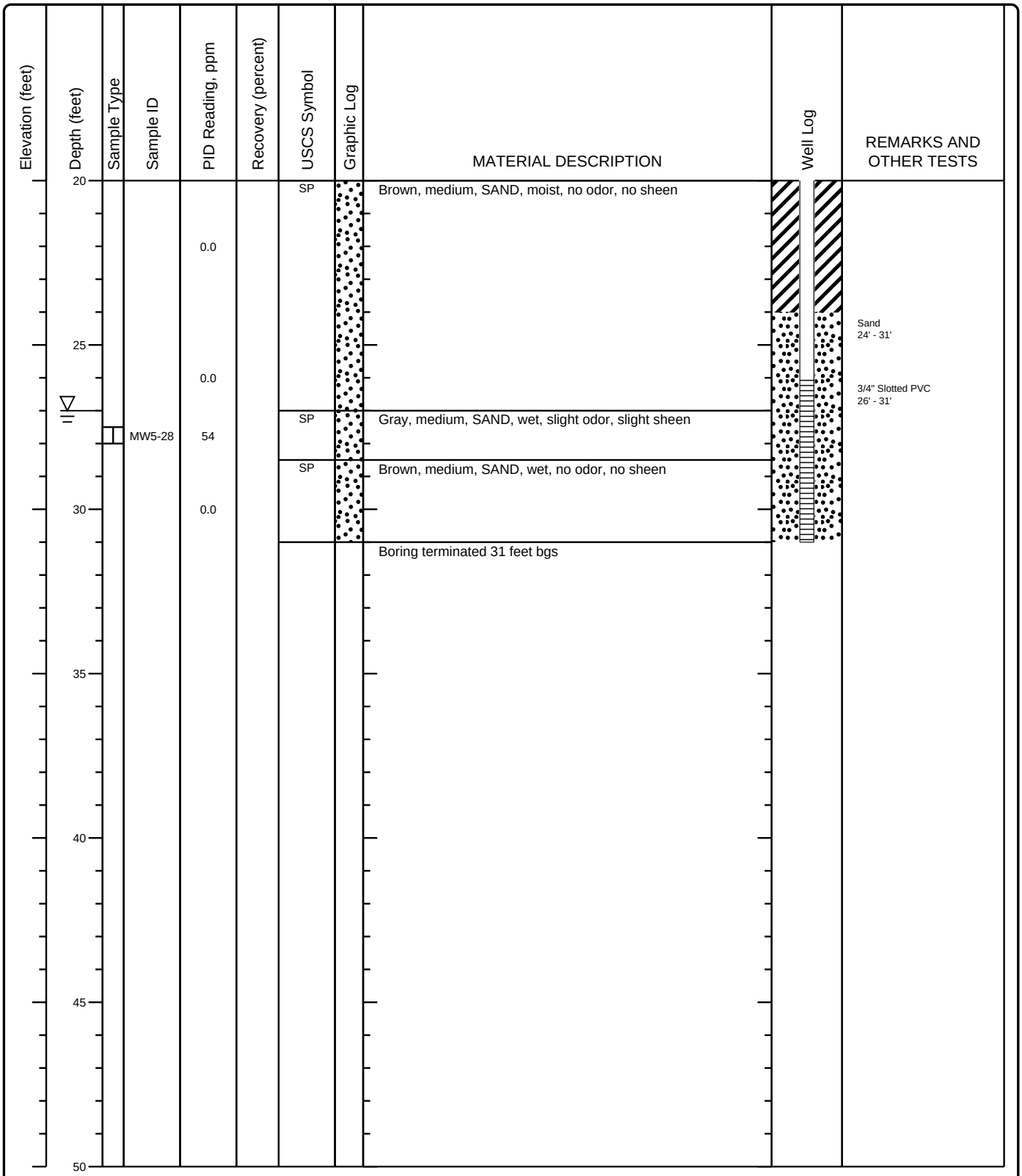
Date(s) Drilled: **07/15/21**	Logged By: **SL**	Surface Conditions: **Asphalt**
Drilling Method(s): **Direct Push**	Drill Bit Size/Type: **2.25"**	Total Depth of Borehole: **31 feet bgs**
Drill Rig Type: **Geoprobe 7730 DT**	Drilling Contractor: **RGI**	Approximate Surface Elevation (feet amsl): **n/a**
Groundwater Level and Date Measured: **27'**	Sampling Method(s): **Continuous**	Hammer Data : **n/a**
Borehole Backfill: **Bentonite**	Location: **9302, 9310 & 9314 State Avenue, Marysville, Washington 98270**	



The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **Marysville Excellent Choice Auto Sales**
Project Number: **2018-244-6**
Client: **Excellent Choice Auto Sales**

Well No.: **MW5 (BKZ 242)**
Sheet 2 of 2



The Riley Group, Inc.
17522 Bothell Way NE, Bothell, WA 98011

Project Name: **Marysville Excellent Choice Auto Sales**
Project Number: **2018-244-6**
Client: **Excellent Choice Auto Sales**

RILEYGROUP

Boring Log Key

Sheet 1 of 1

1 Elevation (feet)	2 Depth (feet)	3 Sample Type	4 Sample ID	5 PID Reading, ppm	6 Recovery (percent)	7 USCS Symbol	8 Graphic Log	9 MATERIAL DESCRIPTION	10 Well Log	11 REMARKS AND OTHER TESTS

COLUMN DESCRIPTIONS

1. Elevation (feet): Elevation (MSL, feet).
2. Depth (feet): Depth in feet below the ground surface.
3. Sample Type: Type of soil sample collected at the depth interval shown.
4. Sample ID: Sample identification number.
5. PID Reading, ppm: The reading from a photo-ionization detector, in parts per million.
6. Recovery (percent): Percent Recovery
7. USCS Symbol: USCS symbol of the subsurface material.
8. Graphic Log: Graphic depiction of the subsurface material encountered.
9. MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
10. Well Log: Graphical representation of well installed upon completion of drilling and sampling.
11. REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.

FIELD AND LABORATORY TEST ABBREVIATIONS

CHEM: Chemical tests to assess corrosivity
COMP: Compaction test
CONS: One-dimensional consolidation test
LL: Liquid Limit, percent
PI: Plasticity Index, percent
SA: Sieve analysis (percent passing No. 200 Sieve)
UC: Unconfined compressive strength test, Qu, in ksf
WA: Wash sieve (percent passing No. 200 Sieve)

MATERIAL GRAPHIC SYMBOLS


Asphaltic Concrete (AC)


Bentonite


Portland Cement Concrete


Poorly graded SAND (SP)

TYPICAL SAMPLER GRAPHIC SYMBOLS


Auger sampler


Bulk Sample


3-inch-OD California w/ brass rings


CME Sampler


Continuous


Grab Sample


2.5-inch-OD Modified California w/ brass liners


Pitcher Sample


2-inch-OD unlined split spoon (SPT)


Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS


Water level (at time of drilling, ATD)


Water level (after waiting)


Minor change in material properties within a stratum

Inferred/gradational contact between strata

Queried contact between strata

GENERAL NOTES

1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

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

July 26, 2021

Paul Riley, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Mr Riley:

Included are the results from the testing of material submitted on July 16, 2021 from the 2018-244-3, F&BI 107264 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Stafford Larsen
TRG0726R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on July 16, 2021 by Friedman & Bruya, Inc. from the The Riley Group 2018-244-3, F&BI 107264 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
107264 -01	IP20-27
107264 -02	IP21-27
107264 -03	IP22-27
107264 -04	IP23-27
107264 -05	IP24-28
107264 -06	IP25-27
107264 -07	IP26-27
107264 -08	IP27-26
107264 -09	IP28-27
107264 -10	IP29-27
107264 -11	IP31-28
107264 -12	IP32-27
107264 -13	IP30-27
107264 -14	IP39-28
107264 -15	IP39-W
107264 -16	IP34-27
107264 -17	IP33-28
107264 -18	IP36-28
107264 -19	IP35-28
107264 -20	IP37-27
107264 -21	IP38-27
107264 -22	MW5-28

All quality control requirements were acceptable.

Date of Report: 07/26/21
Date Received: 07/16/21
Project: 2018-244-3, F&BI 107264
Date Extracted: 07/19/21
Date Analyzed: 07/21/21

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
IP22-27 107264-03 1/20	<0.4	0.73	1.0	<1.2	430	72
IP30-27 107264-13 1/20	<0.4	3.7	8.6	12	1,300	87
IP35-28 107264-19 1/20	<0.4	2.6	4.6	5.8	1,200	81
Method Blank 01-1646 MB	<0.02	<0.02	<0.02	<0.06	<5	80

Date of Report: 07/26/21
Date Received: 07/16/21
Project: 2018-244-3, F&BI 107264
Date Extracted: 07/22/21
Date Analyzed: 07/22/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
IP39-W 107264-15	<1	<1	<1	<3	<100	76
Method Blank 01-1652 MB	<1	<1	<1	<3	<100	79

Date of Report: 07/26/21
Date Received: 07/16/21
Project: 2018-244-3, F&BI 107264

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 107270-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	0.071	<0.06	nm
Gasoline	mg/kg (ppm)	14	11	24 a

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	94	66-121
Toluene	mg/kg (ppm)	0.5	98	72-128
Ethylbenzene	mg/kg (ppm)	0.5	96	69-132
Xylenes	mg/kg (ppm)	1.5	100	69-131
Gasoline	mg/kg (ppm)	20	95	61-153

Date of Report: 07/26/21
Date Received: 07/16/21
Project: 2018-244-3, F&BI 107264

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 107264-15 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	90	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	94	73-126
Xylenes	ug/L (ppb)	150	93	74-118
Gasoline	ug/L (ppb)	1,000	89	69-134

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.

107264

SAMPLE CHAIN OF CUSTODY

ME 07/16/21 ED3/NW1 | BO3/VSS

Page # 1 of 3

Report To Paul Riley & Stafford Lara

Company The Riley Group

Address 17522 Bothell Way NE

City, State, ZIP Bothell WA 98011

Phone _____ Email _____

SAMPLERS (*signature*) [redacted]

PROJECT NAME: 2018-244-3

PO #:

REMARKS: Project specific RLs? - Yes / No

INVOICE TO:

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH _____
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other _____
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx (BTEX)	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
IP20-27	01A-E	7/12/21		Soil	5												(110)
IP21-27	02																(135)
IP22-27	03						X										(250)
IP23-27	04																(0.0)
IP24-28	05																(13.0)
IP25-27	06																(1500)
IP26-27	07	7/13/21															(700)
IP27-26	08																(5)
IP28-27	09																(4)
IP29-27	10																(157)

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Stafford Lara	FOF	7/16/21	1235
Received by:	Liz Webber-Bruya	FBB	7/16/21	1258
Relinquished by:				
Received by:		Samples received at 4 °C		

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

107264

SAMPLE CHAIN OF CUSTODY

ME 07/16/21 E03/E04/B03/3 VSS

Page # _____ of _____

Report To Paul Riley & Stafford Lee

Company Riley Group

Address

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME: 2018-244-3

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx/BTEX	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
IP31-28	11 A-E	7/13/21		soil	5												(75)
IP32-27	12	↓		↓	↓												(5)
IP30-27	13	↓		↓	↓		X										(1500)
IP39-28	14	7/14/21		↓	↓												(1.8)
IP39-W	15 A-C	↓		H2O	7		X										[illegible]
IP34-27	16 A-E	↓		soil	5												(1.5)
IP33-28	17	↓		↓	↓												(1500)
IP36-28	18	↓		↓	↓												(77)
IP35-28	19	↓		↓	↓		X										(1500)
IP37-27	20	↓		↓	↓												(2)

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Stafford	FOL	7/16/21	1215
Received by: S M D M B	Liz Webber-Bruya	FB	7/16/21	1258
Relinquished by:				
Received by:		Samples received at 4 °C		

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

107264

SAMPLE CHAIN OF CUSTODY

ME 07/16/21 E03/VW1/B03/3 VSS 3

Page # _____ of 3

Report To Paul Riley & Stafford Lasen

Company RGI

Address

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME: 2018-244-3

PO #

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Archive samples
- ☐ Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
IV38-27	21AE	7/14/21		Soil	5												(32)
MW5-28	22	7/15/21		↓	↓												(54)

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Stafford	RGI	7/16/21	1235
Received by:	Liz Webber-B	FSB	7/16/21	1225
Relinquished by:				
Received by:		Samples received at 4 °C		

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

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 21, 2021

Stafford Larsen, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Mr Larsen:

Included are the results from the testing of material submitted on June 11, 2021 from the 2018-244-3, F&BI 106184 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Paul Riley
TRG0621R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on June 11, 2021 by Friedman & Bruya, Inc. from the The Riley Group 2018-244-3, F&BI 106184 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
106184 -01	IP2-27
106184 -02	IP5-28
106184 -03	IP6-27
106184 -04	IP8-27
106184 -05	IP11-27
106184 -06	IP17-27
106184 -07	IP19-27
106184 -08	IP14R-27
106184 -09	IP13-27.5
106184 -10	IP16-27.5
106184 -11	IP15-27.5
106184 -12	IP12-27.5
106184 -13	IP13-30
106184 -14	IP18R-27
106184 -15	MW4

All quality control requirements were acceptable.

Date of Report: 06/21/21
Date Received: 06/11/21
Project: 2018-244-3, F&BI 106184
Date Extracted: 06/15/21
Date Analyzed: 06/16/21 and 06/18/21

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
IP18R-27 106184-14 1/5	<0.02 j	<0.1	1.2	3.3	530	100
Method Blank 01-1307 MB	<0.02	<0.02	<0.02	<0.06	<5	92

Date of Report: 06/21/21
Date Received: 06/11/21
Project: 2018-244-3, F&BI 106184
Date Extracted: 06/16/21
Date Analyzed: 06/16/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MW4 106184-15	<1	<1	<1	<3	130	98
Method Blank 01-1305 MB	<1	<1	<1	<3	<100	92

Date of Report: 06/21/21
Date Received: 06/11/21
Project: 2018-244-3, F&BI 106184
Date Extracted: 06/14/21
Date Analyzed: 06/14/21

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
MW4 106184-15	360 x	<250	99
Method Blank 01-1388 MB	<50	<250	100

Date of Report: 06/21/21
Date Received: 06/11/21
Project: 2018-244-3, F&BI 106184

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING METHOD 8021B AND NWTPH-Gx

Laboratory Code: 106208-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	88	69-120
Toluene	mg/kg (ppm)	0.5	91	70-117
Ethylbenzene	mg/kg (ppm)	0.5	90	65-123
Xylenes	mg/kg (ppm)	1.5	92	66-120
Gasoline	mg/kg (ppm)	20	85	71-131

Date of Report: 06/21/21
Date Received: 06/11/21
Project: 2018-244-3, F&BI 106184

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 106197-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	100	65-118
Toluene	ug/L (ppb)	50	98	72-122
Ethylbenzene	ug/L (ppb)	50	100	73-126
Xylenes	ug/L (ppb)	150	97	74-118
Gasoline	ug/L (ppb)	1,000	98	69-134

Date of Report: 06/21/21
Date Received: 06/11/21
Project: 2018-244-3, F&BI 106184

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	132	120	63-142	10

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.

SAMPLE CHAIN OF CUSTODY

106184

MF 06/11/21

VS2/NW2/C04/E03

Page # 1 of 2

Report To Stafford Larsen ; Paul Riley

Company The Riley Group

Address 17522 Bothell Way NE

City, State, ZIP Bothell WA 98011

Phone _____ Email _____

SAMPLERS (*signature*)

PROJECT NAME: 2018-244-3

PO #

REMARKS

Project Specific RLs - Yes / No

INVOICE TO

TURNAROUND TIME
- Standard Turnaround
- RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- Dispose after 30 days
- Archive Samples
- Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
IP2-27	01 A→E	6/1/21	1:40	Soil	5											1095
IP5-28	02	6/3/21	10:00													1135
IP6-27	03		12:30													1075
IP8-27	04		4:00													536
IP11-27	05	6/4/21	12:00	Soil	5											107
IP17-27	06	6/10/21	9:10	Soil	5											
IP14-27	07		11:30													
IP14R-27	08		1:30													
IP13-27.5	09	6/9/21	13:45													
IP16-27.5	10	6/9/21	9:15													Samples received at 1 °C

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Stafford Larsen	RGT	6/11/21	12:23
Received by: William Radford	Will Radford	F&BT	6/11/21	12:21
Relinquished by:				
Received by:				

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

SAMPLE CHAIN OF CUSTODY

106184

ME 06/11/21 VS2/VW2/C04/EC3

Page # 2 of 2

Report To Stafford Lasen & Paul Riley

Company The Riley Group

Address

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME: 2018-244-3

PO #

REMARKS

Project Specific RLs - Yes / No

INVOICE TO

TURNAROUND TIME
Standard Turnaround
RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Dispose after 30 days
Archive Samples
Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx / 4,7	NWTPH-Gx / 8 or 26	BTEX EPA 8021	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082						Notes
IP 15-27.5	11 A→E	6/9/21	1230	Soil	5												* Dx insoil
IP 12-27.5	12 ↓	6/9/21	1050	↓	↓												canceled per SL 6/14/21 ME
IP 13-30	13 A-D	6/9/21	1430	Soil	4												
IP 18R-27	14 A→E	6/10/21	1442	Soil	5	*	X										Sample container time 1440
MW4	15 ↓	6/11/21	1200	H2O	5	X	X										

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:				
Received by:	Wm Radford	F&BI	6/11/21	12:21
Relinquished by:				
Received by:				

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