g-logics

February 5, 2019
G-Logics Project Number 01-1140-F

M&M Ventures, LLC
Mr. Mike Scarff
33 Knights Lane
Friday Harbor, WA 98250

R&E Investments, LLC
Mr. Roger Vermazen
16932 SE 354th Street
Auburn, WA 98092

**Subject:** **Groundwater-Sampling Report, December 2018**
**Fourth Quarter Groundwater Sampling Results**
**Facility/Site No. 57361549**
**PTAP Project No. PNW030**
**Auburn Way Properties**
**3025 and 3109 Auburn Way N**
**Auburn, WA 98002**

Dear Mr. Scarff and Mr. Vermazen:

G-Logics was authorized by M&M Ventures (recent 3025 property owner) and M&M Ventures (recent 3109 property owner) to conduct three additional quarters of groundwater monitoring at the Site (Figure 1). This work is a collaborative effort to verify the successful removal of petroleum contaminants at the Site in order to request a No Further Action (NFA) Opinion from the State of Washington's Pollution Liability Insurance Agency (PLIA).

G-Logics performed this work as described in our workplan dated June 27, 2018. Pervious G-Logics site-exploration and remediation work completed at the Site is documented in our *Additional Soil and Groundwater Sampling* report dated August 13, 2017, our *Environmental Media Management Report* dated December 4, 2017, and our *Well Installation and Groundwater Sampling* report dated April 12, 2018.

**G-Logics, Inc.**
40 2nd Avenue SE
Issaquah, WA 98027
T: 425-391-6874
F: 425-313-3074

## 1.0 Site Background

The Site is composed of two properties, 3025 and 3109 Auburn Way N. The 3025 property is identified as King County tax parcel number 0004000039. The 3109 property is identified as King County tax parcel number 0004000041.

As summarized in the G-Logics Phase I report dated July 18, 2017, this area was primarily agricultural land prior to the 1970s. A review of aerial photographs appears to show row crops throughout the area, with occasional small orchards.

Since at least the early 1970s, an automobile dealership and a service garage historically occupied the northern portion of the 3025 property and the southern portion of the 3109 property (adjacent property to the north). A former 550-gallon used-oil underground storage tank (UST) was removed from west side of the former dealership building located on the 3025 property.

### *1.1 Exploration Background*

Stemen Environmental, Inc. (SEI) conducted a Phase II exploration in this area (report dated December 20, 2012). Soil and groundwater samples were collected on both the 3025 and the 3109 properties. None of the samples that SEI analyzed from the 3025 property contained concentrations of gasoline (GRO), diesel (DRO), oil-range hydrocarbons (ORO), or volatile organic compounds (VOCs) at concentrations above MTCA Method A cleanup levels.

In the SEI Phase II exploration, GRO and ORO hydrocarbons were found exceeding MTCA Method A cleanup levels in soils along the southern boundary of the 3109 property. SEI conducted additional sampling work in June 2017. ORO in soil was detected but at concentrations below the cleanup level. None of the analyzed groundwater samples contained concentrations of GRO, DRO, ORO, or VOCs. However one groundwater sample contained lead at the MTCA Method A cleanup level (15 ug/L) (see G-Logics *Additional Soil and Groundwater Sampling* report dated August 13, 2017 for more information).

To provide additional data for the former UST area, G-Logics conducted soil and groundwater sampling in July 2017. On the 3025 property, the ORO hydrocarbons were found exceeding the MTCA Method A cleanup level in soils along the northern property boundary. DRO and ORO also were found above cleanup levels in two grab-groundwater

samples collected in this area. Total and dissolved concentrations of arsenic also were reported above the MTCA Method A cleanup level in two of the four grab-groundwater samples and in one monitoring well-sample (see G-Logics *Additional Soil and Groundwater Sampling* report dated August 13, 2017 for more information).

The arsenic is likely due to area-wide sources, based on location and lack of relevant operations and activities on the properties. This area is also located within the Tacoma Smelter plume, which may also have contributed to arsenic detections. Other off-property sources may include former-agricultural practices in the area, and/or volcanic deposits from Mount Rainier. Specifically, the Osceola Mudflow buried a large portion this area with volcanic material, originating during eruptions approximately 5,600 years ago.

To address the petroleum-contamination, G-Logics recommended a remedial excavation. Mr. Vermazen (3109 property owner) agreed that if petroleum-contaminated soil was found to extend onto his property, then those contaminated soils also should be removed. Accordingly, the remedial excavation planned for the 3025 property extended to the north onto the 3109 property.

### *1.2 Remediation Background*

In November 2017, petroleum-contaminated media (soil and groundwater) was removed from an area spanning the property line. The work consisted of the removal and disposal of approximately 384 tons of petroleum-contaminated soil and approximately 2,600 gallons of water (rain and groundwater). Analyzed confirmation samples indicated that all petroleum-contaminated soils above MTCA Method A cleanup levels were successfully removed from this area. After the remedial excavation had been completed, 200 pounds of an oxygen-release compound (ORC Advanced) was added to groundwater in the excavation, as well as the backfill material near the groundwater interface (see G-Logics *Environmental Media Management Report* dated December 4, 2017 for more information).

### *1.3 Regulatory Background*

The law that guides the remediation process at sites located within Washington State is the Model Toxics Control Act (MTCA). The regulations implementing MTCA are located in the Washington Administrative Code (WAC), Chapter 173-340. This regulation is administered by the Washington Department of Ecology (Ecology).

The property owners performed an independent remedial action for this Site, in accordance with the Ecology guidance. Such remedial actions are specifically allowed by MTCA, and are encouraged by Ecology and PLIA.

### *1.4 PLIA Background*

As of January 2, 2018 the Pollution Liability Insurance Agency (PLIA) has authority to respond and deliver opinions on qualifying petroleum-contaminated sites throughout Washington. This ability is called the Petroleum Technical Assistance Program (PTAP), as established under RCW 70.149.040(9).

During the intake meeting with PLIA on January 31, 2018, PLIA offered that the two properties (3025 and 3109) be considered as one Site. PLIA requested additional sampling be conducted on both properties to address potential data gaps and to document that any residual contamination did not migrate beyond the Site boundaries. PLIA also requested that the potential for vapor intrusion in nearby buildings be assessed. The Site was accepted into the PTAP program in February, 2018 (letter date February 5, 2018).

To satisfy PLIA's request, additional well installation and sampling was conducted in March 2018 (see G-Logics *Well Installation and Groundwater Sampling* report dated April 12, 2018 for more information). Following their review of this report, PLIA issued a Further Action Letter for the Site, dated May 31, 2018. During a follow-up meeting with PLIA on June 13, 2018, it was confirmed that the potential for vapor intrusion in nearby buildings was not an issue, and that soil contamination associated with a former used-oil UST had been successfully removed (revised Further Action Letter, dated July 13, 2018). However, in order to obtain an NFA Opinion, PLIA indicated that quarterly groundwater monitoring of GRO, DRO, ORO, BTEX (benzene, toluene, ethylbenzene, and xylenes), and arsenic would need to be conducted for at least four additional consecutive quarters.

### *1.5 Quarterly Groundwater-Monitoring Background*

In March 2018 (first quarter) six groundwater-monitoring wells were sampled. GRO and BTEX were not detected in any of the analyzed groundwater samples. All detected concentrations of DRO and ORO were below MTCA Method A cleanup levels. Total arsenic was found above the cleanup level in all wells except GL-MW-5. Dissolved arsenic was below the cleanup level in all wells except GL-MW-2 and GL-MW-4. The highest dissolved arsenic concentration was 14.1 ug/L in GL-MW-2.

In June 2018 (second quarter), six groundwater-monitoring wells were sampled. GRO and BTEX were not detected in any of the analyzed groundwater samples. Analytical results document that GRO and BTEX have never been detected in groundwater samples collected at this Site. Based on these findings, G-Logics requested that GRO and BTEX be removed from the list of analytes for the remaining events. PLIA approved this request in an e-mail dated August 28, 2018.

In June and September 2018, all detected concentrations of DRO and ORO were below cleanup levels with the exception of GL-MW-4 and GL-MW-6, where ORO was detected above the cleanup level in the two wells. Selected water samples also were analyzed using silica-gel methods. Based on the analytical results both DRO and ORO concentration dropped, leaving all detected petroleum concentrations below cleanup levels.

Also in June and September 2018, arsenic was found above the cleanup level in all wells except GL-MW-4 and GL-MW-5. Dissolved arsenic was below the cleanup level in all wells during the June sampling event, and all but one well (GL-MW-2) during the September sampling event. Historical groundwater analytical results are summarized in Table 1. The information for the fourth quarter of monitoring is presented below.

## 2.0 Groundwater Sampling

G-Logics conducted the fourth quarter of groundwater sampling on December 27, 2018. Six groundwater-monitoring wells (MW-1 through MW-6, Figures 2) were sampled to obtain information regarding groundwater contaminants. Eight groundwater samples were collected (including two field duplicates) from the six wells. Collected samples from each well were submitted to the analytical laboratory (Fremont Analytical). Water samples were analyzed for DRO, ORO, and arsenic (total and dissolved). Results of these analyses are presented in Section 4.0 of this report. Field exploration methods are described in Appendix A.

## 3.0 Groundwater-Depth Measurement

On December 27, 2018, groundwater depths were measured in the six monitoring wells. Information regarding groundwater depths, elevations, and well construction is summarized in Table 2. Depth measurements were made from the top of the PVC well casing, prior to well sampling. Groundwater was found at depths ranging from 6.54 to 8.48 feet below top of PVC casing. Groundwater elevations are shown on Figure 3. Contours and inferred-flow directions were not depicted due to the flat gradient.

## 4.0 Groundwater Analytical Results

During the December sampling event, DRO was not detected in any of the analyzed groundwater samples. Detected concentrations of ORO were below MTCA Method A cleanup level in all wells except GL-MW-4 and GL-MW-6. The field duplicate of MW-4 and a lab duplicate of MW-6 show detected concentrations below the cleanup level.

To assess if biological factors such as bacteria (resulting from the treatment compound added at the completion of the 2017 excavation), or other naturally occurring organic material (peat, roots, wood debris) may result in a false positive for ORO concentrations in groundwater, the water samples from selected wells also were analyzed using silica-gel methods. Based on the silica-gel results, ORO concentration dropped below the cleanup level, leaving all detected petroleum concentrations below cleanup levels.

Total arsenic was found above the cleanup level in all wells except GL-MW-4 and GL-MW-5. Dissolved arsenic was below the cleanup level in all wells except GL-MW-2, in which it was slightly above (5.78 ug/L).

Results of these analyses are presented in Table 1 of this report. Appendix A presents field-exploration methods, while Appendix B includes the laboratory reports and chain-of-custody forms.

## 5.0 Quality Assurance/Quality Control Findings

Laboratory duplicate samples, as well as two blind-duplicate groundwater samples (GL-MW-2, and GL-MW-4), were analyzed for data repeatability. The detected concentrations were within acceptable limits for laboratory-repeatability information. The laboratory also conducted matrix spike, matrix-spike duplicate, and method blank analyses. Laboratory QA/QC information is included (with the laboratory report) in Appendix B.

## 6.0 Conclusions

The findings of the quarterly groundwater sampling efforts are summarized below and are presented in Tables 1 and 2 of this report.

- Over the past four quarters of sampling, groundwater was encountered from approximately 6 to 11 feet below the ground surface. During the spring sampling event, groundwater-flow direction appeared to be to the northeast with a very flat gradient, however during the summer, fall, and winter events, groundwater-flow direction was not determined since the gradient was too flat to accurately assess.
- ORO in groundwater was detected slightly above the cleanup level in MW-4 and MW-6 over the last three quarters of sampling.
- DRO in groundwater was not detected above the cleanup level in any of the monitoring wells over the past four quarters.
- Selected groundwater-monitoring well samples also were analyzed using silica-gel methods. Based on the analytical results, both DRO and ORO concentration dropped, leaving all detected petroleum concentrations below cleanup levels.
- GRO and BTEX were not detected in any of the analyzed groundwater samples during the first two quarters, therefore they were removed from the list of analytes going forward.
- Total arsenic in groundwater was found above the cleanup level in all wells except GL-MW-4 (last three quarters) and GL-MW-5 (all four quarters).
- For groundwater samples that exhibited total arsenic concentrations above the cleanup level, duplicate samples were lab filtered to remove turbidity and then analyzed for dissolved arsenic concentrations.

- Dissolved arsenic in groundwater was below cleanup levels in all wells except GL-MW-2, in which it was slightly above for three of the four quarters. The first quarter for GL-MW-4 also was slightly above the cleanup level.
- Groundwater sampling work conducted during 2017 showed that GRO, BTEX, PCBs, VOCs, cPAHs were not detected in any of the analyzed groundwater samples. Naphthalene, and metals (with the exception of arsenic) were not detected above cleanup levels in any of the analyzed groundwater samples.

## 7.0 Discussion

Petroleum-contaminated soils and groundwater were removed through the remedial excavation conducted in November 2017. Confirmation soil samples collected during the excavation, as well as the additional soil sampling conducted during the March 2018 exploration, has confirmed that the petroleum-contaminated soils (associated with the former UST) have been successfully removed. This information also indicates the petroleum-contaminated soils did not extend beyond the remedial-excavation boundaries (see G-Logics *Well Installation and Groundwater Sampling* report dated April 12, 2018 for more information).

Based on the information gathered over the last four quarters of groundwater sampling, all detected DRO and ORO groundwater concentrations remained below cleanup levels when using silica-gel methods. Biological factors such as bacteria (resulting from the treatment compound added at the completion of the 2017 excavation), or other naturally occurring organic material (peat, roots, wood debris) may result in a false positive for ORO concentrations in groundwater, justifying the use of silica-gel methods.

Dissolved arsenic also now appears to be below the cleanup level in all wells except GL-MW-2. With respect to arsenic, historical review of the Site did not identify any commercial or industrial source of arsenic from prior activities or operations. The Site is within the Asarco area-wide smelter plume, and volcanic deposits from the Osceola mudflow also likely are present. Agricultural practices in the area also may have contributed to area-wide arsenic concentrations. Furthermore potential exposures to arsenic in the groundwater are very limited. Specifically, this area is covered with buildings or asphalt, prohibiting direct contact with the groundwater. Additionally, the shallow groundwater in this area likely would be of low quality and would yield insufficient

quantities to be considered to be a viable source of drinking water. With these understandings, detected arsenic concentrations do not present a risk to human health or the environment, and it is our opinion that arsenic does not require further evaluation or remediation.

Analytical data shows ORO slightly exceeds the Method A cleanup level in groundwater found in GL-MW-4 and GL-MW-6. Furthermore, the use of silica-gel for samples collected from these wells indicate ORO is not present above the cleanup level. We recognize that the use of silica-gel currently is being evaluated.

Given the extensive remediation and the associated monitoring work conducted to date, we believe that further expenditure of resources is not warranted. Specifically, M&M Ventures and R&E Investments have successfully addressed the petroleum-contaminated soils and groundwater in this area of the two properties. Additionally, it has been previously established that residual elevated concentrations of petroleum hydrocarbons, in both soil and groundwater, do not extend beyond the Site boundaries.

## 8.0 Recommendations

The completed work documents the successful remediation of the former UST area. Groundwater monitoring indicates the low and residual arsenic and ORO concentration do not present an unacceptable risk. Accordingly G-Logics recommends that PLIA provide a No Further Action opinion for the Site.

## 9.0 Limitations

The scope of work on this project was presented in our identified workplan and subsequently approved by M&M Ventures and R&E Investments. Please be aware our scope of work was limited to those items specifically identified in the workplan. Other activities not specifically included in the presented scope of work (in a workplan, correspondence, or this report) are excluded and are therefore not part of our services.

The provided scope of services was intended to provide a quarterly assessment of groundwater conditions at the Site. This work was not designed to identify all potential concerns or to eliminate all risk. This work only included services specifically described above.

Land use, site conditions (both on-site and off-site), and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings, and opinions can be considered valid only as of the date of the site sampling.

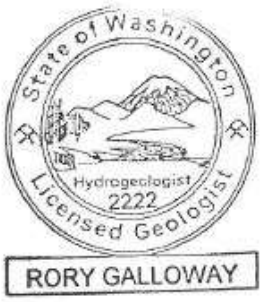
This report is prepared for the sole use of our client and reviewing regulatory agencies. The scope of services performed during this assessment may not be appropriate for the needs of other users. Re-use of this document or the findings, conclusions, or recommendations presented herein, are at the sole risk of said user(s). Any party other than our client who would like to use this report shall notify G-Logics of such intended use by executing the "Permission and Conditions for Use and Copying" contained in this document. Based on the intended use of the report, G-Logics may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements will release G-Logics from any liability resulting from the use of this report by any unauthorized party.

No warranty, either express or implied, is made.

## 10.0 Closing

We appreciate this opportunity to provide our services on this project. Please contact us at your convenience with any questions regarding our work or findings.

Sincerely,
**G-Logics, Inc.**




Rory L. Galloway, LG, LHG
Principal

Karis Vandehey, LG, WSLWD
Staff Geologist

cc Greg Rairdon
Ken Lederman
Li Ma

**FIGURES**



**TABLES**

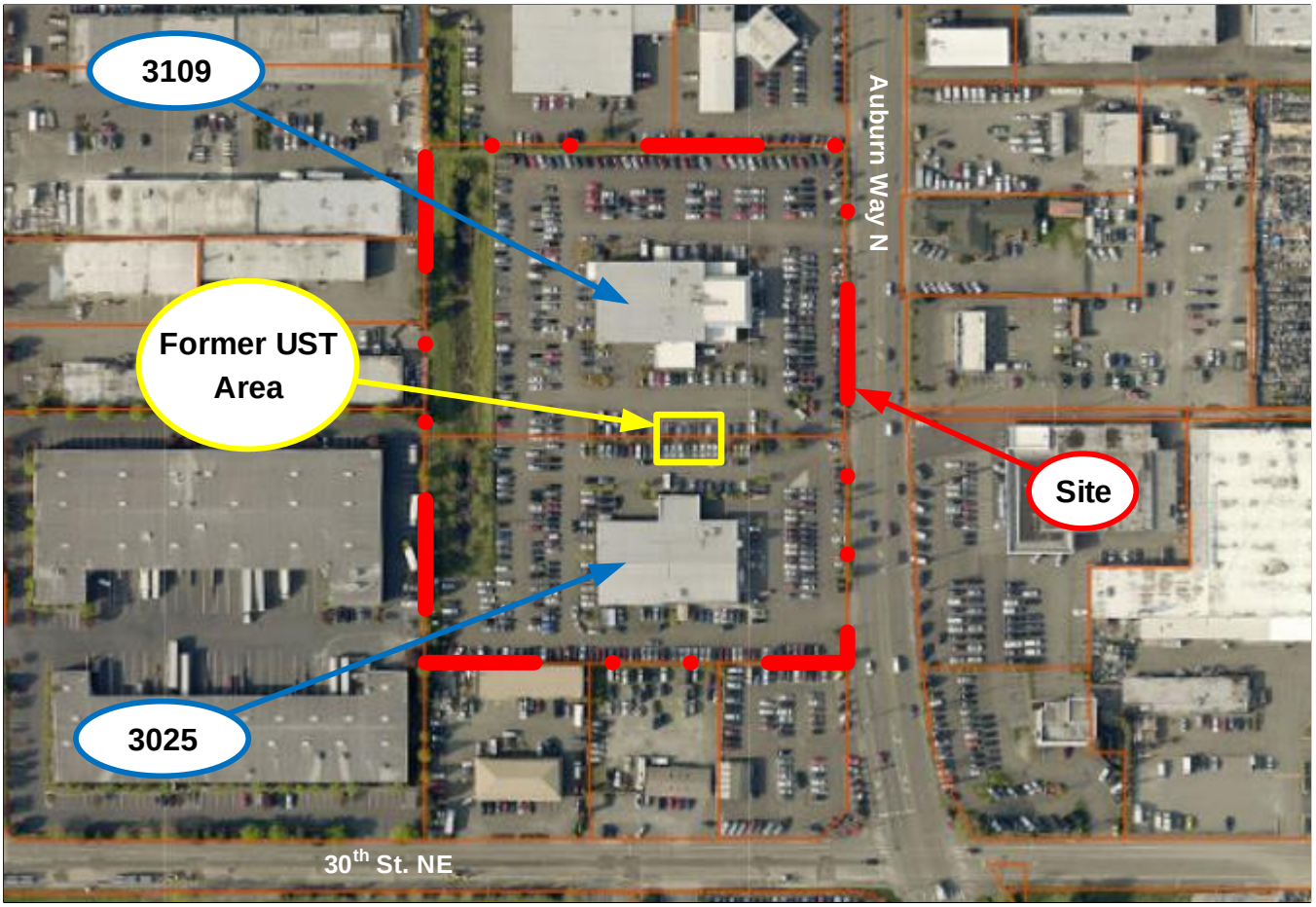


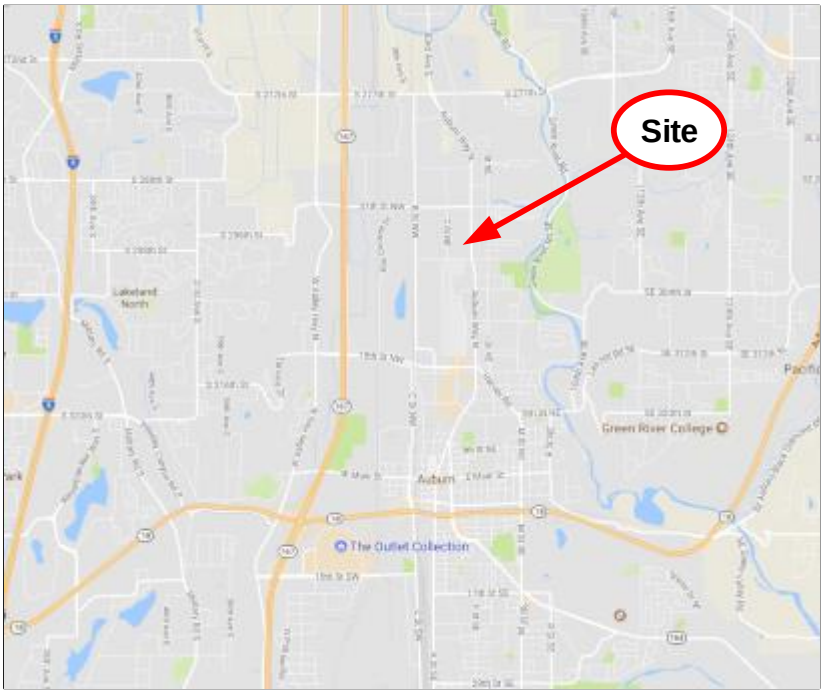
**APPENDICES**



**ATTACHMENTS**

# FIGURES





Project File: 01-1140-F-F1.vsd

g-logics

***Site Location Maps***

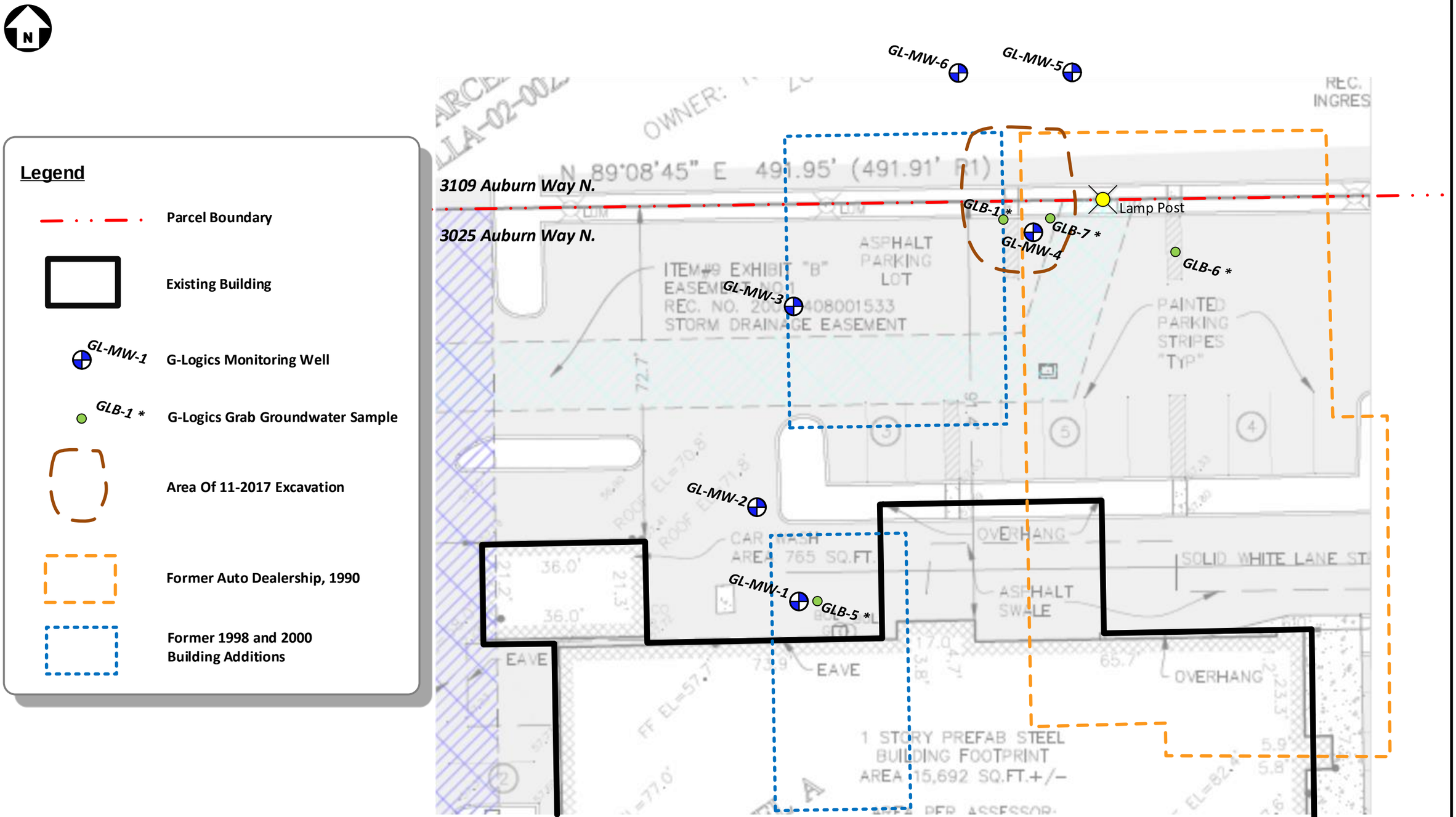
***Auburn Way Property***

***3025 and 3109 Auburn Way North***

***Auburn, Washington***

Figure 1

Mapping Reference: King County iMap, Delorme, Google Maps, and G-Logics Site Visit Observations




Project File: 01-1140-F-F2.vsd

g-logics

Approximate Drawing Scale: 1" = 20'

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

Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

***Site Diagram, Groundwater Sample Locations***

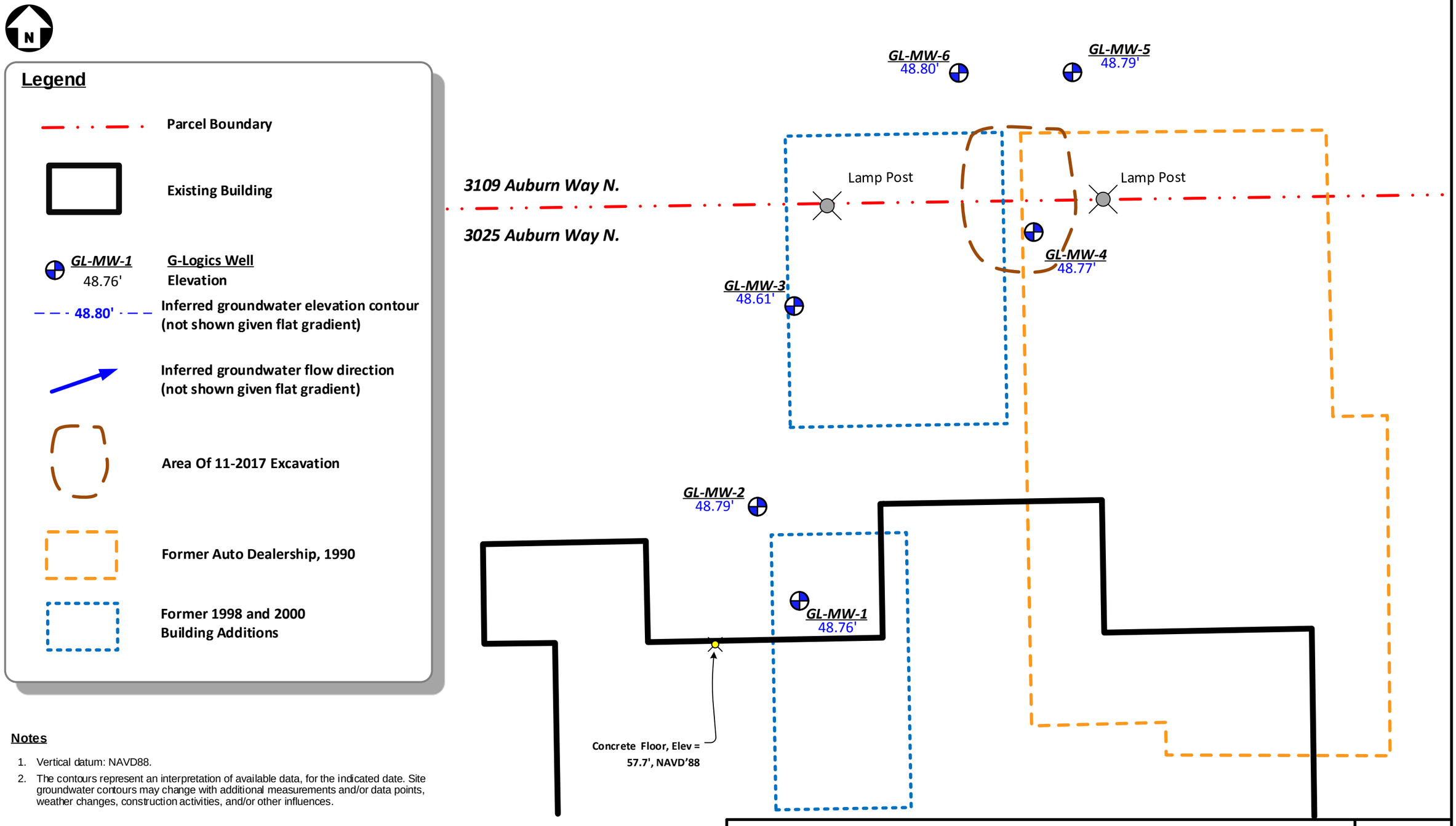
***Auburn Way Properties***

***3025 and 3109 Auburn Way North***

***Auburn, Washington***

Figure 2

*Mapping Reference: ALTA/NSPS Land Title Survey 8/3/2017, Riley Phase I, and G-Logics Site Visit Observations and Measurements*




**Notes**

1. Vertical datum: NAVD88.
2. The contours represent an interpretation of available data, for the indicated date. Site groundwater contours may change with additional measurements and/or data points, weather changes, construction activities, and/or other influences.

Project File: 01-1140-F-F3-December 2018.vsd

g-logics

**Approximate Drawing Scale: 1" = 20'**

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

Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

***Groundwater Elevations (12/27/2018)***
***Auburn Way Properties***
***3025 and 3109 Auburn Way North***
***Auburn, Washington***

Figure
3

*Mapping Reference: Terrane ALTA/NSPS Land Title Survey 8/3/2017, Riley Phase I, and G-Logics Site Visit Observations and Measurements*

# TABLES

**TABLE 1 (1)**
**Groundwater Sample Analyses**
**Auburn Way Property**
**3025 Auburn Way North**
**Auburn, Washington**

| Exploration Location | Sample Date | Sample Number | Sample Depth (ft) | Gasoline Range Organics (no detectable benzene) | Diesel Range Organics | Diesel Range Organics (SGT) | Heavy Oil Range Organics | Heavy Oil Range Organics (SGT) | Benzene | Toluene | Ethylbenzene | Xylenes | Arsenic (Total) | Arsenic (Dissolved) | Cadmium | Chromium (Total) | Lead | Mercury | Total PCBs (a) | VOCs (a) | 2-Methylnaphthalene | cPAHs (a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MTCA Cleanup Level (2)(3)** | | | | 1,000 | 500 | 500 | 500 | 500 | 5.00 | 1,000 | 700 | 1,000 | 5 | 5 | 5 | 50 | 15 | 2 | 0.100 | Various | 32* | 0.1 |
| **(units in ug/L)** | | | | | | | | | | | | | | | | | | | | | | |
| **Stemen Environmental Inc.** | | | | | | | | | | | | | | | | | | | | | | |
| **December, 2012** | | | | | | | | | | | | | | | | | | | | | | |
| **S1** | 12/12/2012 | S1-W | 8 | <100 | <250 | --- | <500 | --- | <1 | <1 | <1 | <3 | --- | --- | --- | --- | --- | --- | --- | nd | --- | --- |
| **S4 (b)** | 12/12/2012 | S4-W | 8 | <100 | <250 | --- | <500 | --- | <1 | <1 | <1 | <3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S6** | 12/12/2012 | S6-W | 8 | <100 | <250 | --- | <500 | --- | <1 | <1 | <1 | <3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Stemen Environmental Inc.** | | | | | | | | | | | | | | | | | | | | | | |
| **December, 2012** | | | | | | | | | | | | | | | | | | | | | | |
| **R2 (b)** | 6/2/2017 | R2-W | | <100 | <250 | --- | <500 | --- | <1 | <1 | <1 | <3 | --- | --- | --- | --- | **15** | --- | --- | nd | --- | --- |
| **R5 (b)** | 6/2/2017 | R5-W | | <100 | <250 | --- | <500 | --- | <1 | <1 | <1 | <3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **G-Logics** | | | | | | | | | | | | | | | | | | | | | | |
| **July, 2017 (Pre Remedial Eacvation)** | | | | | | | | | | | | | | | | | | | | | | |
| **GLB-1-W (4)** | 7/21/2017 | GLB-1-W | 9-14ft | <50 | <49.9 | --- | **1,670** | **1,210** | <1 | <1 | <1 | <1 | **2.44** | --- | <0.200 | **1.79** | **2.06** | <0.100 | <0.100 | nd | <0.0997 | nd |
| **GLB-5-W (4)** | 7/21/2017 | GLB-5-W | 9-14ft | <50 | <49.9 | --- | **700** | **599** | <1 | <1 | <1 | <1 | **20.7** | **5.19** | <0.200 | **8.68** | **0.592** | <0.100 | --- | nd | --- | --- |
| **GLB-6-W (4)** | 7/21/2017 | GLB-6-W | 9-14ft | <50 | <49.9 | --- | **161** | --- | <1 | <1 | <1 | <1 | **6.25** | --- | <0.200 | **2.00** | **1.32** | <0.100 | --- | nd | --- | --- |
| **GLB-7-W (4)** | 7/21/2017 | GLB-7-W | 9-14ft | <50 | **1,200** | **857** | **4,370** | **3,090** | <1 | <1 | <1 | <1 | **19.0** | **6.94** | <0.200 | **1.87** | **1.89** | <0.100 | <0.999 | nd | **0.143** | nd |
| **GL-MW-1** | 7/31/2017 | GL-MW-1 | 5-15ft | --- | <49.9 | --- | **426** | --- | --- | --- | --- | --- | **25.0** | **20.7** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 7/31/2017 | GL-MW-100 | Field Dup. | --- | <49.8 | --- | **375** | --- | --- | --- | --- | --- | **27.9** | **21.1** | --- | --- | --- | --- | --- | --- | --- | --- |

**TABLE 1 (1)**
**Groundwater Sample Analyses**
**Auburn Way Property**
**3025 Auburn Way North**
**Auburn, Washington**

| Exploration Location | Sample Date | Sample Number | Sample Depth (ft) | Gasoline Range Organics (no detectable benzene) | Diesel Range Organics | Diesel Range Organics (SGT) | Heavy Oil Range Organics | Heavy Oil Range Organics (SGT) | Benzene | Toluene | Ethylbenzene | Xylenes | Arsenic (Total) | Arsenic (Dissolved) | Cadmium | Chromium (Total) | Lead | Mercury | Total PCBs (a) | VOCs (a) | 2-Methylnaphthalene | cPAHs (a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MTCA Cleanup Level (2)(3)** | | | | 1,000 | 500 | 500 | 500 | 500 | 5.00 | 1,000 | 700 | 1,000 | 5 | 5 | 5 | 50 | 15 | 2 | 0.100 | Various | 32* | 0.1 |
| **(units in ug/L)** | | | | | | | | | | | | | | | | | | | | | | |
| **G-Logics** | | | | | | | | | | | | | | | | | | | | | | |
| **Post Remedial Excavation** | | | | | | | | | | | | | | | | | | | | | | |
| **GL-MW-1** | 3/20/2018 | GL-MW-1 | 5-15ft | <50 | **119** | --- | **219** | --- | <1 | <1 | <1 | <1 | **26.0** | **4.31** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 3/20/2018 | GL-MW-A | Field Dup. | <50 | **78.1** | --- | **291** | --- | <1 | <1 | <1 | <1 | **27.0** | **4.61** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 6/26/2018 | GL-MW-1 | 5-15ft | <50 | **78.9** | **63.3** | **307** | **232** | <1 | <1 | <1 | <1 | **30.8** | **3.00** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9/24/2018 | GL-MW-1 | 5-15ft | --- | **97.5** | **81.2** | **255** | <99.6 | --- | --- | --- | --- | **38.6** | **4.83** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-1 | 5-15ft | --- | <50 | --- | **323** | --- | --- | --- | --- | --- | **37.4** | **3.87** | --- | --- | --- | --- | --- | --- | --- | --- |
| **GL-MW-2** | 3/20/2018 | GL-MW-2 | 5-15ft | <50 | <49.9 | --- | **161** | --- | <1 | <1 | <1 | <1 | **44.3** | **14.1** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 6/26/2018 | GL-MW-2 | 5-15ft | <50 | <50 | <50 | **209** | **156** | <1 | <1 | <1 | <1 | **100** | **4.24** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9/24/2018 | GL-MW-2 | 5-15ft | --- | <50.4 | <50.4 | **208** | **142** | --- | --- | --- | --- | **113** | **11.70** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-2 | 5-15ft | --- | <49.7 | --- | **228** | **---** | --- | --- | --- | --- | **117** | **5.78** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-B | Field Dup. | --- | --- | --- | --- | --- | --- | --- | --- | --- | **122** | **5.75** | --- | --- | --- | --- | --- | --- | --- | --- |
| **GL-MW-3** | 3/20/2018 | GL-MW-3 | 5-15ft | <50 | <49.9 | --- | <99.9 | --- | <1 | <1 | <1 | <1 | **25.7** | **4.56** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 6/26/2018 | GL-MW-3 | 5-15ft | <50 | <49.8 | <49.8 | **125** | <99.7 | <1 | <1 | <1 | <1 | **24.2** | <1.75 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9/24/2018 | GL-MW-3 | 5-15ft | --- | **56.1** | <49.6 | **127** | <99.1 | --- | --- | --- | --- | **24.7** | **3.18** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-3 | 5-15ft | --- | <50.3 | --- | **155** | --- | --- | --- | --- | --- | **25.2** | **1.97** | --- | --- | --- | --- | --- | --- | --- | --- |
| **GL-MW-4** | 3/20/2018 | GL-MW-4 | 5-15ft | <50 | **152** | --- | **259** | --- | <1 | <1 | <1 | <1 | **6.16** | **6.15** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 6/26/2018 | GL-MW-4 | 5-15ft | <50 | **152** | **148** | **798** | **461** | <1 | <1 | <1 | <1 | **2.90** | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9/24/2018 | GL-MW-4 | 5-15ft | --- | **149** | **119** | **759** | **499** | --- | --- | --- | --- | **3.43** | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-4 | 5-15ft | --- | <49.7 | <49.7 | **725** | **300** | --- | --- | --- | --- | **2.17** | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-A | Field Dup. | --- | <50.1 | <50.1 | **489** | **234** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GL-MW-5** | 3/20/2018 | GL-MW-5 | 5-15ft | <50 | <50 | --- | <100 | --- | <1 | <1 | <1 | <1 | **1.80** | <1.75 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 6/26/2018 | GL-MW-5 | 5-15ft | <50 | <49.9 | --- | <99.8 | --- | <1 | <1 | <1 | <1 | **2.54** | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9/24/2018 | GL-MW-5 | 5-15ft | --- | <49.7 | <60.6 | **114** | <121 | --- | --- | --- | --- | **2.00** | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-5 | 5-15ft | --- | <50 | --- | **117** | --- | --- | --- | --- | --- | <1.75 | --- | --- | --- | --- | --- | --- | --- | --- | --- |

**TABLE 1 (1)**
**Groundwater Sample Analyses**
**Auburn Way Property**
**3025 Auburn Way North**
**Auburn, Washington**

| Exploration Location | Sample Date | Sample Number | Sample Depth (ft) | Gasoline Range Organics (no detectable benzene) | Diesel Range Organics | Diesel Range Organics (SGT) | Heavy Oil Range Organics | Heavy Oil Range Organics (SGT) | Benzene | Toluene | Ethylbenzene | Xylenes | Arsenic (Total) | Arsenic (Dissolved) | Cadmium | Chromium (Total) | Lead | Mercury | Total PCBs (a) | VOCs (a) | 2-Methylnaphthalene | cPAHs (a) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **MTCA Cleanup Level (2)(3)** | | | | 1,000 | 500 | 500 | 500 | 500 | 5.00 | 1,000 | 700 | 1,000 | 5 | 5 | 5 | 50 | 15 | 2 | 0.100 | Various | 32* | 0.1 |
| **(units in ug/L)** | | | | | | | | | | | | | | | | | | | | | | |
| **GL-MW-6** | 3/20/2018 | GL-MW-6 | 5-15ft | <50 | **69.8** | --- | **346** | --- | <1 | <1 | <1 | <1 | **11.1** | **2.57** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 6/26/2018 | GL-MW-6 | 5-15ft | <50 | **102** | **81.3** | **608** | **438** | <1 | <1 | <1 | <1 | **8.96** | <1.75 | --- | --- | --- | --- | --- | --- | --- | --- |
| | 6/26/2018 | GL-MW-A | Field Dup. | <50 | **58.7** | <49.9 | **658** | **441** | <1 | <1 | <1 | <1 | **8.82** | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9/24/2018 | GL-MW-6 | 5-15ft | --- | **128** | **100** | **510** | **276** | --- | --- | --- | --- | **9.41** | **2.85** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 9/24/2018 | GL-MW-A | Field Dup. | --- | **154** | **121** | **545** | **380** | --- | --- | --- | --- | **9.43** | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-6 | 5-15ft | --- | <50.2 | <50.2 | **596** | **289** | --- | --- | --- | --- | **9.16** | **2.16** | --- | --- | --- | --- | --- | --- | --- | --- |
| | 12/27/2018 | GL-MW-6 | Lab Dup. | --- | <50.3 | --- | **499** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

Notes:

(1) Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.

(2) Available Method A Cleanup Levels or Most Conservative Method B Cleanup Levels, MTCA, revised 2015. Exceeding Cleanup Levels does not necessarily trigger requirements for Cleanup Actions under MTCA. Refer to site diagram(s) for sampling locations.

(3) Gasoline Analyses by Method NWTPH-Gx, Diesel and Heavy Oil by NWTPH-Dx/Dx Ext., MTCA 5 Metals by 200.8/245.1, VOCs by 8260C, PAH by 8270 (SIM), PCB by 8082.

(4) Grab Groundwater Sample

(a) Analytes were not detected. See attached analytical laboratory reports for details.

(b) No analytical laboratory report included in the Stemen Environmental report to verify analytical data.

* Method B Cleanup Level.

** Not researched, no available data.

--- Sample not analyzed.

nd Not Detected

Dup. Duplicate Sample for QA/QC.

<50.0 Sample concentration below laboratory reporting limit.

**27** Bold number(s) indicates contaminant detected, below cleanup level.

**160** Bold number(s) and yellow shading indicates concentration exceeds MTCA Cleanup Level.

**SGT** Silica Gel Treatment

12/27/2018 Indicates most recent sampling event.

Important Note: This Table Contains Information in color.
Black & white photocopies may not be suitable for review.

## TABLE 2

## Groundwater Elevation Measurements
## Auburn Way Properties

| Well Designation | Well Installation Date | Elevation Top of PVC Casing (ft.)* (1) | Depth to Top of Screen (ft.) | Depth to Bottom of Screen (ft.) | Well Diam. (in.) | Date Measured | Depth to Water (ft.) | Calculated GW Elevations (ft.) |
|---|---|---|---|---|---|---|---|---|
| **GL-MW-01** | 7/31/18 | 57.20 | 5 | 15 | 2 | 03/14/18 | 8.11 | 49.09 |
| | | | | | | 03/20/18 | 8.29 | 48.91 |
| | | 57.24 | | | | 06/26/18 | 9.67 | 47.57 |
| | | | | | | 09/24/18 | 10.71 | 46.53 |
| | | | | | | 12/27/18 | 8.48 | 48.76 |
| **GL-MW-02** | 3/12/18 | 56.64 | 5 | 15 | 2 | 03/14/18 | 7.53 | 49.11 |
| | | | | | | 03/20/18 | 7.68 | 48.96 |
| | | 56.66 | | | | 06/26/18 | 9.08 | 47.58 |
| | | | | | | 09/24/18 | 10.12 | 46.54 |
| | | | | | | 12/27/18 | 7.87 | 48.79 |
| **GL-MW-03**** | 3/12/18 | 56.09 | 5 | 15 | 2 | 03/14/18 | 7.03 | 49.06 |
| | 3/20/18 | | 5 | 15 | 2 | 03/20/18 | 7.21 | 48.88 |
| | | 56.13 | | | | 06/26/18 | 8.54 | 47.59 |
| | | | | | | 09/24/18 | 9.59 | 46.54 |
| | | | | | | 12/27/18 | 7.52 | 48.61 |
| **GL-MW-04** | 3/12/18 | 55.87 | 5 | 15 | 2 | 03/14/18 | 6.85 | 49.02 |
| | | | | | | 03/20/18 | 7.02 | 48.85 |
| | | 55.97 | | | | 06/26/18 | 8.39 | 47.58 |
| | | | | | | 09/24/18 | 9.45 | 46.52 |
| | | | | | | 12/27/18 | 7.20 | 48.77 |
| **GL-MW-05** | 3/12/18 | 55.18 | 5 | 15 | 2 | 03/14/18 | 6.19 | 48.99 |
| | | | | | | 03/20/18 | 6.35 | 48.83 |
| | | 55.33 | | | | 06/26/18 | 7.75 | 47.58 |
| | | | | | | 09/24/18 | 8.79 | 46.54 |
| | | | | | | 12/27/18 | 6.54 | 48.79 |
| **GL-MW-06** | 3/13/18 | 55.53 | 5 | 15 | 2 | 03/14/18 | 6.52 | 49.01 |
| | | | | | | 03/20/18 | 6.7 | 48.83 |
| | | 55.67 | | | | 06/26/18 | 8.07 | 47.60 |
| | | | | | | 09/24/18 | 9.12 | 46.55 |
| | | | | | | 12/27/18 | 6.87 | 48.80 |

Notes:

(1) Original survey was completed on 3/13/2018, prior to the reinstallation of GL-MW-3. Updated survey of all wells was completed on 6/26/2018.

* Elevations based on a backsight to the concrete floor at the north entrance of the auto shop. The floor elevation at this location is 57.7' (Figure 2).

** GL-MW-3 was installed on 3/12/18. Due to drillers sand continually coming into the well durring development (broken screen?), the original well was decommissioned and reinstalled on 3/20/18.

\# Depth not recorded.

-- Not Applicable.

# APPENDIX A

# FIELD EXPLORATION METHODS

G-Logics performed shallow groundwater sampling during the assessment conducted on the subject property. The sampling activities were conducted in general accordance with Washington Department of Ecology (Ecology) guidelines and regulations.

## Quality Assurance Quality Control

Quality Assurance/Quality Control (QA/QC) for the presented scope of work included generally accepted procedures for sample collection, storage, tracking, and documentation. All sampling equipment was washed and rinsed before the collection of the samples. All samples were labeled with a sample number, date, time, and sampler name, and were stored in an ice chest containing frozen "blue ice". Appropriate chain-of-custody documentation was completed.

## Water-Level Measurements in Wells

Water-level measurements were referenced to the top of the well casing. The static water level was measured in each monitoring-well using a conductivity type, water-level probe (Keck Model 1213, Flat Tape Water Level Meter). The conductivity probe was lowered into the well until the instrument detected water. The tape on the probe was used to obtain a depth-to-water measurement, from the reference point, to within 0.01 feet.

## Monitoring-Well Sampling, Peristaltic-Pump Method

A G-Logics employee sampled groundwater wells in accordance with the following protocol.

- The height of the water column within the well was calculated by subtracting the depth to water from the total depth of the well. The volume of this water column was calculated using the relationship $V=3.14r^2h$. Where V is the volume of water in cubic feet, r is the radius of the well in feet and h is the height of the water column in feet.
- Based on these calculations, 3 to 5 volumes of water were removed from the well casing prior to collection of samples.

- All purge water was collected and placed into an onsite oil-water separator located inside the car wash area.
- The contract laboratory prepared the sample containers to conform to EPA-recommended preservation techniques for the analytes of concern.
- Groundwater samples were collected with a peristaltic pump. Sample containers were open only as long as necessary to collect the samples.
- Sample bottles were labeled with a sample number, date, time, and G-Logics employee's name, and were stored in an ice chest containing frozen "blue ice". Chain-of-custody procedures were followed to document sample handling.
- Dedicated tubing was used at each sampling location.

# APPENDIX B

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

**G-Logics**
Karis Vandehey
40 Second Ave. SE
Issaquah, WA 98027

**RE: Auburn Properties**
**Work Order Number: 1812388**

January 09, 2019

**Attention Karis Vandehey:**

Fremont Analytical, Inc. received 8 sample(s) on 12/27/2018 for the analyses presented in the following report.

***Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.***
***Dissolved Metals by EPA Method 200.8***
***Total Metals by EPA Method 200.8***

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

**Date:** *01/09/2019*

**CLIENT:** G-Logics
**Project:** Auburn Properties
**Work Order:** 1812388

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Date/Time Collected | Date/Time Received |
|---|---|---|---|
| 1812388-001 | GL-MW-1 | 12/27/2018 12:10 PM | 12/27/2018 2:55 PM |
| 1812388-002 | GL-MW-2 | 12/27/2018 11:45 AM | 12/27/2018 2:55 PM |
| 1812388-003 | GL-MW-3 | 12/27/2018 11:15 AM | 12/27/2018 2:55 PM |
| 1812388-004 | GL-MW-4 | 12/27/2018 10:20 AM | 12/27/2018 2:55 PM |
| 1812388-005 | GL-MW-5 | 12/27/2018 1:45 PM | 12/27/2018 2:55 PM |
| 1812388-006 | GL-MW-6 | 12/27/2018 1:20 PM | 12/27/2018 2:55 PM |
| 1812388-007 | GL-MW-A | 12/27/2018 12:00 AM | 12/27/2018 2:55 PM |
| 1812388-008 | GL-MW-B | 12/27/2018 12:00 AM | 12/27/2018 2:55 PM |



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

# Case Narrative

WO#: **1812388**

Date: **1/9/2019**

**CLIENT:** G-Logics

**Project:** Auburn Properties

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

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

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

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018 12:10:00 PM
**Project:** Auburn Properties
**Lab ID:** 1812388-001
**Matrix:** Water
**Client Sample ID:** **GL-MW-1**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.** | | | | Batch ID: 23112 | | Analyst: DW |
| Diesel (Fuel Oil) | ND | 50.0 | | µg/L | 1 | 1/2/2019 7:38:39 PM |
| Heavy Oil | 323 | 100 | | µg/L | 1 | 1/2/2019 7:38:39 PM |
| Surr: 2-Fluorobiphenyl | 84.6 | 50 - 150 | | %Rec | 1 | 1/2/2019 7:38:39 PM |
| Surr: o-Terphenyl | 85.2 | 50 - 150 | | %Rec | 1 | 1/2/2019 7:38:39 PM |
| **Dissolved Metals by EPA Method 200.8** | | | | Batch ID: 23178 | | Analyst: WC |
| Arsenic | 3.87 | 1.75 | | µg/L | 1 | 1/7/2019 11:02:00 AM |
| **Total Metals by EPA Method 200.8** | | | | Batch ID: 23103 | | Analyst: WC |
| Arsenic | 37.4 | 1.75 | | µg/L | 1 | 12/28/2018 6:13:54 PM |

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018 11:45:00 AM
**Project:** Auburn Properties
**Lab ID:** 1812388-002
**Matrix:** Water
**Client Sample ID:** **GL-MW-2**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.** | | | | Batch ID: 23112 | | Analyst: DW |
| Diesel (Fuel Oil) | ND | 49.7 | | µg/L | 1 | 1/2/2019 8:08:22 PM |
| Heavy Oil | 228 | 99.4 | | µg/L | 1 | 1/2/2019 8:08:22 PM |
| Surr: 2-Fluorobiphenyl | 83.4 | 50 - 150 | | %Rec | 1 | 1/2/2019 8:08:22 PM |
| Surr: o-Terphenyl | 86.4 | 50 - 150 | | %Rec | 1 | 1/2/2019 8:08:22 PM |
| **Dissolved Metals by EPA Method 200.8** | | | | Batch ID: 23178 | | Analyst: WC |
| Arsenic | 5.78 | 1.75 | | µg/L | 1 | 1/7/2019 11:59:18 AM |
| **Total Metals by EPA Method 200.8** | | | | Batch ID: 23103 | | Analyst: WC |
| Arsenic | 117 | 1.75 | | µg/L | 1 | 12/28/2018 6:26:07 PM |

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018 11:15:00 AM
**Project:** Auburn Properties
**Lab ID:** 1812388-003
**Matrix:** Water
**Client Sample ID:** **GL-MW-3**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.** | | | | Batch ID: 23112 | | Analyst: DW |
| Diesel (Fuel Oil) | ND | 50.3 | | µg/L | 1 | 1/2/2019 8:38:02 PM |
| Heavy Oil | 155 | 101 | | µg/L | 1 | 1/2/2019 8:38:02 PM |
| Surr: 2-Fluorobiphenyl | 83.6 | 50 - 150 | | %Rec | 1 | 1/2/2019 8:38:02 PM |
| Surr: o-Terphenyl | 90.0 | 50 - 150 | | %Rec | 1 | 1/2/2019 8:38:02 PM |
| **Dissolved Metals by EPA Method 200.8** | | | | Batch ID: 23178 | | Analyst: WC |
| Arsenic | 1.97 | 1.75 | | µg/L | 1 | 1/7/2019 12:03:50 PM |
| **Total Metals by EPA Method 200.8** | | | | Batch ID: 23103 | | Analyst: WC |
| Arsenic | 25.2 | 1.75 | | µg/L | 1 | 12/28/2018 6:30:08 PM |

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018 10:20:00 AM
**Project:** Auburn Properties
**Lab ID:** 1812388-004
**Matrix:** Water
**Client Sample ID:** **GL-MW-4**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.** | | | | Batch ID: 23112 | | Analyst: DW |
| Diesel (Fuel Oil) | ND | 49.7 | SGT | µg/L | 1 | 1/9/2019 6:27:06 AM |
| Diesel (Fuel Oil) | ND | 49.7 | | µg/L | 1 | 1/2/2019 9:07:43 PM |
| Heavy Oil | 300 | 99.4 | SGT | µg/L | 1 | 1/9/2019 6:27:06 AM |
| Heavy Oil | 725 | 99.4 | | µg/L | 1 | 1/2/2019 9:07:43 PM |
| Surr: 2-Fluorobiphenyl | 82.8 | 50 - 150 | SGT | %Rec | 1 | 1/9/2019 6:27:06 AM |
| Surr: 2-Fluorobiphenyl | 76.2 | 50 - 150 | | %Rec | 1 | 1/2/2019 9:07:43 PM |
| Surr: o-Terphenyl | 84.8 | 50 - 150 | SGT | %Rec | 1 | 1/9/2019 6:27:06 AM |
| Surr: o-Terphenyl | 79.7 | 50 - 150 | | %Rec | 1 | 1/2/2019 9:07:43 PM |

**NOTES:**
SGT - Silica Gel Treatment

| | | | | | | |
|---|---|---|---|---|---|---|
| **Total Metals by EPA Method 200.8** | | | | Batch ID: 23103 | | Analyst: WC |
| Arsenic | 2.17 | 1.75 | | µg/L | 1 | 12/28/2018 6:34:09 PM |

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018 1:45:00 PM
**Project:** Auburn Properties
**Lab ID:** 1812388-005
**Matrix:** Water
**Client Sample ID:** **GL-MW-5**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.** | | | | Batch ID: 23112 | | Analyst: DW |
| Diesel (Fuel Oil) | ND | 50.0 | | µg/L | 1 | 1/2/2019 9:37:22 PM |
| Heavy Oil | 117 | 100 | | µg/L | 1 | 1/2/2019 9:37:22 PM |
| Surr: 2-Fluorobiphenyl | 78.7 | 50 - 150 | | %Rec | 1 | 1/2/2019 9:37:22 PM |
| Surr: o-Terphenyl | 82.2 | 50 - 150 | | %Rec | 1 | 1/2/2019 9:37:22 PM |
| **Total Metals by EPA Method 200.8** | | | | Batch ID: 23103 | | Analyst: WC |
| Arsenic | ND | 1.75 | | µg/L | 1 | 12/28/2018 6:38:10 PM |

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018 1:20:00 PM
**Project:** Auburn Properties
**Lab ID:** 1812388-006
**Matrix:** Water
**Client Sample ID:** **GL-MW-6**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.** | | | | Batch ID: 23112 | | Analyst: DW |
| Diesel (Fuel Oil) | ND | 50.2 | SGT | µg/L | 1 | 1/9/2019 6:57:06 AM |
| Diesel (Fuel Oil) | ND | 50.2 | | µg/L | 1 | 1/2/2019 10:07:22 PM |
| Heavy Oil | 289 | 100 | SGT | µg/L | 1 | 1/9/2019 6:57:06 AM |
| Heavy Oil | 596 | 100 | | µg/L | 1 | 1/2/2019 10:07:22 PM |
| Surr: 2-Fluorobiphenyl | 84.0 | 50 - 150 | SGT | %Rec | 1 | 1/9/2019 6:57:06 AM |
| Surr: 2-Fluorobiphenyl | 77.3 | 50 - 150 | | %Rec | 1 | 1/2/2019 10:07:22 PM |
| Surr: o-Terphenyl | 85.7 | 50 - 150 | SGT | %Rec | 1 | 1/9/2019 6:57:06 AM |
| Surr: o-Terphenyl | 80.9 | 50 - 150 | | %Rec | 1 | 1/2/2019 10:07:22 PM |

**NOTES:**
SGT - Silica Gel Treatment

| | | | | | | |
|---|---|---|---|---|---|---|
| **Dissolved Metals by EPA Method 200.8** | | | | Batch ID: 23178 | | Analyst: WC |
| Arsenic | 2.16 | 1.75 | | µg/L | 1 | 1/7/2019 12:16:57 PM |
| **Total Metals by EPA Method 200.8** | | | | Batch ID: 23103 | | Analyst: WC |
| Arsenic | 9.16 | 1.75 | | µg/L | 1 | 12/28/2018 6:42:11 PM |

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018
**Project:** Auburn Properties
**Lab ID:** 1812388-007
**Matrix:** Water
**Client Sample ID:** **GL-MW-A**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.** | | | | Batch ID: 23112 | | Analyst: DW |
| Diesel (Fuel Oil) | ND | 50.1 | SGT | µg/L | 1 | 1/9/2019 8:57:09 AM |
| Diesel (Fuel Oil) | ND | 50.1 | | µg/L | 1 | 1/3/2019 1:34:49 AM |
| Heavy Oil | 234 | 100 | SGT | µg/L | 1 | 1/9/2019 8:57:09 AM |
| Heavy Oil | 489 | 100 | | µg/L | 1 | 1/3/2019 1:34:49 AM |
| Surr: 2-Fluorobiphenyl | 80.2 | 50 - 150 | SGT | %Rec | 1 | 1/9/2019 8:57:09 AM |
| Surr: 2-Fluorobiphenyl | 71.5 | 50 - 150 | | %Rec | 1 | 1/3/2019 1:34:49 AM |
| Surr: o-Terphenyl | 80.6 | 50 - 150 | SGT | %Rec | 1 | 1/9/2019 8:57:09 AM |
| Surr: o-Terphenyl | 74.2 | 50 - 150 | | %Rec | 1 | 1/3/2019 1:34:49 AM |

**NOTES:**
SGT - Silica Gel Treatment

# Analytical Report

Work Order: **1812388**
Date Reported: **1/9/2019**

**Client:** G-Logics
**Collection Date:** 12/27/2018
**Project:** Auburn Properties
**Lab ID:** 1812388-008
**Matrix:** Water
**Client Sample ID:** **GL-MW-B**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Dissolved Metals by EPA Method 200.8** | | | | Batch ID: 23178 | | Analyst: WC |
| Arsenic | 5.75 | 1.75 | | µg/L | 1 | 1/7/2019 12:20:58 PM |
| **Total Metals by EPA Method 200.8** | | | | Batch ID: 23103 | | Analyst: WC |
| Arsenic | 122 | 1.75 | | µg/L | 1 | 12/28/2018 6:46:12 PM |

**Work Order:** 1812388
**CLIENT:** G-Logics
**Project:** Auburn Properties

# QC SUMMARY REPORT

## Dissolved Metals by EPA Method 200.8

| Sample ID | **MB-23178** | SampType: | **MBLK** | | | Units: | **µg/L** | Prep Date: | **1/7/2019** | RunNo: | **48789** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **MBLKW** | Batch ID: | **23178** | | | | | Analysis Date: | **1/7/2019** | SeqNo: | **956740** |

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 1.75 | | | | | | | | | |

| Sample ID | **LCS-23178** | SampType: | **LCS** | | | Units: | **µg/L** | Prep Date: | **1/7/2019** | RunNo: | **48789** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSW** | Batch ID: | **23178** | | | | | Analysis Date: | **1/7/2019** | SeqNo: | **956741** |

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 97.0 | 1.75 | 100.0 | 0 | 97.0 | 85 | 115 | | | | |

| Sample ID | **1812388-001CDUP** | SampType: | **DUP** | | | Units: | **µg/L** | Prep Date: | **1/7/2019** | RunNo: | **48789** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **GL-MW-1** | Batch ID: | **23178** | | | | | Analysis Date: | **1/7/2019** | SeqNo: | **956743** |

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 3.63 | 1.75 | | | | | | 3.874 | 6.41 | 30 | |

| Sample ID | **1812388-001CMS** | SampType: | **MS** | | | Units: | **µg/L** | Prep Date: | **1/7/2019** | RunNo: | **48789** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **GL-MW-1** | Batch ID: | **23178** | | | | | Analysis Date: | **1/7/2019** | SeqNo: | **956744** |

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 524 | 1.75 | 500.0 | 3.874 | 104 | 70 | 130 | | | | |

| Sample ID | **1812388-001CMSD** | SampType: | **MSD** | | | Units: | **µg/L** | Prep Date: | **1/7/2019** | RunNo: | **48789** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **GL-MW-1** | Batch ID: | **23178** | | | | | Analysis Date: | **1/7/2019** | SeqNo: | **956745** |

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 524 | 1.75 | 500.0 | 3.874 | 104 | 70 | 130 | 523.5 | 0.103 | 30 | |

**Work Order:** 1812388
**CLIENT:** G-Logics
**Project:** Auburn Properties

# QC SUMMARY REPORT

## Dissolved Metals by EPA Method 200.8

Sample ID **MB-23175FB** SampType: **MBLK** Units: **µg/L** Prep Date: **1/7/2019** RunNo: **48789**
Client ID: **MBLKW** Batch ID: **23178** Analysis Date: **1/7/2019** SeqNo: **956758**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 1.75 | | | | | | | | | |

**NOTES:**
Filter Blank

**Work Order:** 1812388
**CLIENT:** G-Logics
**Project:** Auburn Properties

# QC SUMMARY REPORT

## Total Metals by EPA Method 200.8

| Sample ID | **MB-23103** | SampType: | **MBLK** | | | Units: | **µg/L** | Prep Date: | **12/28/2018** | RunNo: | **48626** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **MBLKW** | Batch ID: | **23103** | | | | | Analysis Date: | **12/28/2018** | SeqNo: | **953283** | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Arsenic | | ND | 1.75 | | | | | | | | | |

| Sample ID | **LCS-23103** | SampType: | **LCS** | | | Units: | **µg/L** | Prep Date: | **12/28/2018** | RunNo: | **48626** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSW** | Batch ID: | **23103** | | | | | Analysis Date: | **12/28/2018** | SeqNo: | **953284** | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Arsenic | | 99.3 | 1.75 | 100.0 | 0 | 99.3 | 85 | 115 | | | | |

| Sample ID | **1812373-001ADUP** | SampType: | **DUP** | | | Units: | **µg/L** | Prep Date: | **12/28/2018** | RunNo: | **48626** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BATCH** | Batch ID: | **23103** | | | | | Analysis Date: | **12/28/2018** | SeqNo: | **953286** | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Arsenic | | 8.47 | 1.75 | | | | | | 8.038 | 5.24 | 30 | |

| Sample ID | **1812373-001AMS** | SampType: | **MS** | | | Units: | **µg/L** | Prep Date: | **12/28/2018** | RunNo: | **48626** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BATCH** | Batch ID: | **23103** | | | | | Analysis Date: | **12/28/2018** | SeqNo: | **953287** | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Arsenic | | 527 | 1.75 | 500.0 | 8.038 | 104 | 70 | 130 | | | | |

| Sample ID | **1812373-001AMSD** | SampType: | **MSD** | | | Units: | **µg/L** | Prep Date: | **12/28/2018** | RunNo: | **48626** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **BATCH** | Batch ID: | **23103** | | | | | Analysis Date: | **12/28/2018** | SeqNo: | **953288** | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Arsenic | | 562 | 1.75 | 500.0 | 8.038 | 111 | 70 | 130 | 527.1 | 6.49 | 30 | |

**Work Order:** 1812388
**CLIENT:** G-Logics
**Project:** Auburn Properties

# QC SUMMARY REPORT

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

| Sample ID **MB-23112** | SampType: **MBLK** | | | Units: **µg/L** | | Prep Date: **12/28/2018** | | RunNo: **48687** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **MBLKW** | Batch ID: **23112** | | | | | Analysis Date: **1/2/2019** | | SeqNo: **954573** | | |
| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel (Fuel Oil) | ND | 50.1 | | | | | | | | | |
| Heavy Oil | ND | 100 | | | | | | | | | |
| Surr: 2-Fluorobiphenyl | 60.4 | | 80.18 | | 75.3 | 50 | 150 | | | | |
| Surr: o-Terphenyl | 64.5 | | 80.18 | | 80.4 | 50 | 150 | | | | |

| Sample ID **LCS-23112** | SampType: **LCS** | | | Units: **µg/L** | | Prep Date: **12/28/2018** | | RunNo: **48687** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **23112** | | | | | Analysis Date: **1/2/2019** | | SeqNo: **954574** | | |
| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel (Fuel Oil) | 767 | 50.0 | 999.3 | 0 | 76.7 | 65 | 135 | | | | |
| Surr: 2-Fluorobiphenyl | 64.6 | | 79.94 | | 80.8 | 50 | 150 | | | | |
| Surr: o-Terphenyl | 67.5 | | 79.94 | | 84.4 | 50 | 150 | | | | |

| Sample ID **1812376-001ADUP** | SampType: **DUP** | | | Units: **µg/L** | | Prep Date: **12/28/2018** | | RunNo: **48687** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **BATCH** | Batch ID: **23112** | | | | | Analysis Date: **1/2/2019** | | SeqNo: **954835** | | |
| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel (Fuel Oil) | ND | 50.3 | | | | | | 0 | | 30 | |
| Heavy Oil | 774 | 101 | | | | | | 725.9 | 6.35 | 30 | |
| Surr: 2-Fluorobiphenyl | 64.9 | | 80.45 | | 80.7 | 50 | 150 | | 0 | | |
| Surr: o-Terphenyl | 60.9 | | 80.45 | | 75.7 | 50 | 150 | | 0 | | |

| Sample ID **1812388-006ADUP** | SampType: **DUP** | | | Units: **µg/L** | | Prep Date: **12/28/2018** | | RunNo: **48687** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **GL-MW-6** | Batch ID: **23112** | | | | | Analysis Date: **1/2/2019** | | SeqNo: **954849** | | |
| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Diesel (Fuel Oil) | ND | 50.3 | | | | | | 0 | | 30 | |
| Heavy Oil | 499 | 101 | | | | | | 596.1 | 17.6 | 30 | |
| Surr: 2-Fluorobiphenyl | 60.1 | | 80.46 | | 74.7 | 50 | 150 | | 0 | | |

**Work Order:** 1812388
**CLIENT:** G-Logics
**Project:** Auburn Properties

# QC SUMMARY REPORT

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

| Sample ID | 1812388-006ADUP | SampType: | DUP | | | Units: | µg/L | | Prep Date: | 12/28/2018 | | RunNo: | 48687 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | GL-MW-6 | Batch ID: | 23112 | | | | | | Analysis Date: | 1/2/2019 | | SeqNo: | 954849 | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Surr: o-Terphenyl | | 64.2 | | 80.46 | | 79.8 | 50 | 150 | | 0 | | | | |

| Sample ID | 1812388-006AMS | SampType: | MS | | | Units: | µg/L | | Prep Date: | 12/28/2018 | | RunNo: | 48687 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | GL-MW-6 | Batch ID: | 23112 | | | | | | Analysis Date: | 1/3/2019 | | SeqNo: | 954852 | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Diesel (Fuel Oil) | | 734 | 50.1 | 1,003 | 0 | 73.3 | 65 | 135 | | | | | | |
| Surr: 2-Fluorobiphenyl | | 65.6 | | 80.20 | | 81.8 | 50 | 150 | | | | | | |
| Surr: o-Terphenyl | | 67.0 | | 80.20 | | 83.6 | 50 | 150 | | | | | | |

| Sample ID | 1812388-006AMSD | SampType: | MSD | | | Units: | µg/L | | Prep Date: | 12/28/2018 | | RunNo: | 48687 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | GL-MW-6 | Batch ID: | 23112 | | | | | | Analysis Date: | 1/3/2019 | | SeqNo: | 954853 | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Diesel (Fuel Oil) | | 677 | 50.1 | 1,002 | 0 | 67.5 | 65 | 135 | 734.5 | 8.21 | 30 | | | |
| Surr: 2-Fluorobiphenyl | | 61.0 | | 80.14 | | 76.2 | 50 | 150 | | 0 | | | | |
| Surr: o-Terphenyl | | 65.2 | | 80.14 | | 81.4 | 50 | 150 | | 0 | | | | |

| Sample ID | MB-23112 | SampType: | MBLK | | | Units: | µg/L | | Prep Date: | 12/28/2018 | | RunNo: | 48832 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | MBLKW | Batch ID: | 23112 | | | | | | Analysis Date: | 1/9/2019 | | SeqNo: | 957541 | |
| Analyte | | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Diesel (Fuel Oil) | | ND | 50.1 | | | | | | | | | SGT | | |
| Heavy Oil | | ND | 100 | | | | | | | | | SGT | | |
| Surr: 2-Fluorobiphenyl | | 67.2 | | 80.18 | | 83.8 | 50 | 150 | | | | SGT | | |
| Surr: o-Terphenyl | | 72.4 | | 80.18 | | 90.4 | 50 | 150 | | | | SGT | | |

**NOTES:**
SGT - Silica Gel Treatment

**Work Order:** 1812388
**CLIENT:** G-Logics
**Project:** Auburn Properties

# QC SUMMARY REPORT

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

Sample ID **LCS-23112** SampType: **LCS** Units: **µg/L** Prep Date: **12/28/2018** RunNo: **48832**
Client ID: **LCSW** Batch ID: **23112** Analysis Date: **1/9/2019** SeqNo: **957542**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel (Fuel Oil) | 866 | 50.0 | 999.3 | 0 | 86.7 | 65 | 135 | | | | SGT |
| Surr: 2-Fluorobiphenyl | 72.4 | | 79.94 | | 90.5 | 50 | 150 | | | | SGT |
| Surr: o-Terphenyl | 76.3 | | 79.94 | | 95.5 | 50 | 150 | | | | SGT |

**NOTES:**
SGT - Silica Gel Treatment

Sample ID **1812388-006ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **12/28/2018** RunNo: **48832**
Client ID: **GL-MW-6** Batch ID: **23112** Analysis Date: **1/9/2019** SeqNo: **957545**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel (Fuel Oil) | ND | 50.3 | | | | | | 0 | | 30 | SGT |
| Heavy Oil | 248 | 101 | | | | | | 289.2 | 15.5 | 30 | SGT |
| Surr: 2-Fluorobiphenyl | 65.6 | | 80.46 | | 81.6 | 50 | 150 | | 0 | | SGT |
| Surr: o-Terphenyl | 68.2 | | 80.46 | | 84.7 | 50 | 150 | | 0 | | SGT |

**NOTES:**
SGT - Silica Gel Treatment

Sample ID **1812388-006AMS** SampType: **MS** Units: **µg/L** Prep Date: **12/28/2018** RunNo: **48832**
Client ID: **GL-MW-6** Batch ID: **23112** Analysis Date: **1/9/2019** SeqNo: **957546**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel (Fuel Oil) | 790 | 50.1 | 1,003 | 0 | 78.8 | 65 | 135 | | | | SGT |
| Surr: 2-Fluorobiphenyl | 68.7 | | 80.20 | | 85.7 | 50 | 150 | | | | SGT |
| Surr: o-Terphenyl | 69.6 | | 80.20 | | 86.8 | 50 | 150 | | | | SGT |

**NOTES:**
SGT - Silica Gel Treatment

Sample ID **1812388-006AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **12/28/2018** RunNo: **48832**
Client ID: **GL-MW-6** Batch ID: **23112** Analysis Date: **1/9/2019** SeqNo: **957547**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Diesel (Fuel Oil) | 721 | 50.1 | 1,002 | 0 | 72.0 | 65 | 135 | 790.3 | 9.16 | 30 | SGT |

**Work Order:** 1812388
**CLIENT:** G-Logics
**Project:** Auburn Properties

# QC SUMMARY REPORT

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

Sample ID **1812388-006AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **12/28/2018** RunNo: **48832**
Client ID: **GL-MW-6** Batch ID: **23112** Analysis Date: **1/9/2019** SeqNo: **957547**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 2-Fluorobiphenyl | 65.3 | | 80.14 | | 81.4 | 50 | 150 | | 0 | | SGT |
| Surr: o-Terphenyl | 69.4 | | 80.14 | | 86.6 | 50 | 150 | | 0 | | SGT |

**NOTES:**
SGT - Silica Gel Treatment

# Sample Log-In Check List

| | | | |
|---|---|---|---|
| Client Name: | **GL** | Work Order Number: | **1812388** |
| Logged by: | **Brianna Barnes** | Date Received: | **12/27/2018 2:55:00 PM** |

## *Chain of Custody*

| | | | | |
|---|---|---|---|---|
| 1. | Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. | How was the sample delivered? | Client | | |

## *Log In*

| | | | | |
|---|---|---|---|---|
| 3. | Coolers are present? | Yes ☑ | No ☐ | NA ☐ |
| 4. | Shipping container/cooler in good condition? | Yes ☑ | No ☐ | |
| 5. | Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact) | Yes ☐ | No ☐ | Not Required ☑ |
| 6. | Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 7. | Were all items received at a temperature of >0°C to 10.0°C* | Yes ☑ | No ☐ | NA ☐ |
| 8. | Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 9. | Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 10. | Are samples properly preserved? | Yes ☑ | No ☐ | |
| 11. | Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 12. | Is there headspace in the VOA vials? | Yes ☐ | No ☐ | NA ☑ |
| 13. | Did all samples containers arrive in good condition(unbroken)? | Yes ☑ | No ☐ | |
| 14. | Does paperwork match bottle labels? | Yes ☑ | No ☐ | |
| 15. | Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | |
| 16. | Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 17. | Were all holding times able to be met? | Yes ☑ | No ☐ | |

## *Special Handling (if applicable)*

| | | | | |
|---|---|---|---|---|
| 18. | Was client notified of all discrepancies with this order? | Yes ☐ | No ☐ | NA ☑ |

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

**Item Information**

| Item # | Temp ºC |
|---|---|
| Cooler | 7.6 |
| Sample | 6.2 |
| Temp Blank | 7.3 |

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

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

# Chain of Custody Record & Laboratory Services Agreement

Date: 12/27/18 Page: 1 of 1

Laboratory Project No (internal): 19123090

Client: G-LOGICS
Address: 40 2ND AVE SE
City, State, Zip: ISSAQUAH WA
Telephone:
Fax:

Project Name: AUBURN PROPERTIES
Project No: 01-1140-F
Collected by: KARIS VANDEHEY
Location: 3025+3109 AUBURN WAY
Report To (PM): KARIS VANDEHEY
PM Email: KARIS V@G-LOGICS.COM

Special Remarks:
-RUN AS DISSOLVED IF AS IS ABOVE 5
-MAY RUN W/SILICAGEL IF DX IS ABOVE 500 (PLEASE CALL OR EMAIL 425-761-9540

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

| | Sample Name | Sample Date | Sample Time | Sample Type (Matrix)* | VOCs (EPA 8260 / 624) | GX/BTEX | BTEX | Gasoline Range Organics (GX) | Hydrocarbon Identification (HCID) | Diesel/Heavy Oil Range Organics (DX) | SVOCs (EPA 8270 / 625) | PAHs (EPA 8270 - SIM) | PCBs (EPA 8270 - SIM) | Metals** (EPA 6020 / 200.8) | Total (1) / Dissolved (D) | Anions (IC)*** | EDB (8011) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GL-MW-1 | 12/27/18 | 1210 | H20 | | | | | X | | | | | X | | | | (1) AMBER (2) POLY |
| 2 | GL-MW-2 | | 1145 | | | | | | X | | | | | X | | | | (1) AMBER (2) POLY |
| 3 | GL-MW-3 | | 1115 | | | | | | X | | | | | X | | | | " " " " |
| 4 | GL-MW-4 | | 1020 | | | | | | X | | | | | X | | | | " " " " |
| 5 | GL-MW-5 | | 1345 | | | | | | X | | | | | X | | | | " " " " |
| 6 | GL-MW-6 | | 1320 | | | | | | X | | | | | X | | | | " " " " |
| 7 | GL-MW-A | | | | | | | | X | | | | | | | | | (2) AMBERS " " |
| 8 | GL-MW-B | | | | | | | | | | | | | X | | | | (1) AMBER [redacted] |
| 9 | | | | | | | | | | | | | | | | | | [redacted] " " |
| 10 | | | | | | | | | | | | | | | | | | |

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

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

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

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

Relinquished x [signature] Date/Time 12/27/18 1450
Relinquished x Date/Time
Received x [signature] Date/Time 12/28/18 1455
Received x Date/Time

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

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

# Chain of Custody Record & Laboratory Services Agreement

Date: 12/27/18 Page: 1 of 1

Laboratory Project No (internal): 19123090

Project Name: AUBURN PROPERTIES

Project No: 01-1140-F

Collected by: KARIS VANDEHEY

Location: 3025+3109 AUBURN WAY

Report To (PM): KARIS VANDEHEY

PM Email: KARIS V@G-LOGICS.COM

Special Remarks:
- RUN AS DISSOLVED IF AS IS ABOVE 5
- MAY RUN W/SILICAGEL IF DX IS ABOVE 500 (PLEASE CALL OR EMAIL 425-761-9540

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

Client: G-LOGICS

Address: 40 2ND AVE SE

City, State, Zip: ISSAQUAH WA

Telephone:

Fax:

| | Sample Name | Sample Date | Sample Time | Sample Type (Matrix)* | VOCs (EPA 8260 / 624) | GX/BTEX | BTEX | Gasoline Range Organics (GX) | Hydrocarbon Identification (HCID) | Diesel/Heavy Oil Range Organics (DX) | SVOCs (EPA 8270 / 625) | PAHs (EPA 8270 - SIM) | PCBs (EPA 8082 / 608) | Metals** (EPA 6020 / 200.8) | Total (T) / Dissolved (D) | Anions (IC)*** | EDB (8011) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GL-MW-1 | 12/27/18 | 1210 | H2O | | | | | | | | | | X | D | | | (1) AMBER (2) POLY |
| 2 | GL-MW-2 | | 1145 | | | | | | | | | | | X | D | | | (1) AMBER (2) POLY |
| 3 | GL-MW-3 | | 1115 | | | | | | | | | | | X | D | | | " " " " |
| 4 | GL-MW-4 | | 1020 | | | | | | | | | | | X | | | | " " " " |
| 5 | GL-MW-5 | | 1345 | | | | | | | | | | | X | | | | " " " " |
| 6 | GL-MW-6 | | 1320 | | | | | | | | | | | X | D | | | (2) AMBERS " " |
| 7 | GL-MW-A | | | | | | | | | | | | | X | | | | (1) AMBER ~~~~ |
| 8 | GL-MW-B | | | | | | | | | | | | | X | D | | | ~~~~ " " |
| 9 | | | | | | | | | | | | | | | | | | (D) Add Analysis 1/4/19 cw |
| 10 | | | | | | | | | | | | | | | | | | |

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

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

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

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

Relinquished x [signature] Date/Time 12/27/18 1450

Relinquished x Date/Time

Received x [signature] Date/Time 12/26 SPS /18 1455

Received x Date/Time 27

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

# Chain of Custody Record & Laboratory Services Agreement

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

Date: 12/27/18 Page: 1 of 1

Laboratory Project No (internal): 19123890

Project Name: AUBURN PROPERTIES

Project No: 01-1140-F

Special Remarks:
- RUN AS DISSOLVED IF AS IS ABOVE 5
- MAY RUN W/SILICAGEL IF DX IS ABOVE 500 (PLEASE CALL OR EMAIL 425-761-9540

Client: G-LOGICS

Address: 40 2ND AVE SE

City, State, Zip: ISSAQUAH WA

Telephone:

Fax:

Collected by: KARIS VANDEHEY

Location: 3025+3109 AUBURN WAY

Report To (PM): KARIS VANDEHEY

PM Email: KARIS V@G-LOGICS.COM

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

| | Sample Name | Sample Date | Sample Time | Sample Type (Matrix)* | VOCs (EPA 8260 / 624) | GX/BTEX | BTEX | Gasoline Range Organics (GX) | Hydrocarbon Identification (HCID) | Diesel/Heavy Oil Range Organics (DX) | SVOCs (EPA 8270 / 625) | PAHs (EPA 8270 - SIM) | PCBs (EPA 8082 / 608) | Metals** (EPA 6020 / 200.8) | Total (T) / Dissolved (D) | Anions (IC)*** | EDB (8011) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GL-MW-1 | 12/27/18 | 1210 | H2O | | | | | | X | | | | X | D | | | (1) AMBER (2) POLY |
| 2 | GL-MW-2 | | 1145 | | | | | | | X | | | | X | D | | | (1) AMBER (2) POLY |
| 3 | GL-MW-3 | | 1115 | | | | | | | X | | | | X | D | | | " " " " |
| 4 | GL-MW-4 | | 1020 | | | | | | | X | | | | X | | | | " " " " |
| 5 | GL-MW-5 | | 1345 | | | | | | | X | | | | X | | | | " " " " |
| 6 | GL-MW-6 | | 1320 | | | | | | | X | | | | X | D | | | (2) AMBERS " " |
| 7 | GL-MW-A | | | | | | | | | X | | | | | | | | (1) AMBER |
| 8 | GL-MW-B | | | | | | | | | | | | | X | D | | | " " |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

(D) Add Analysis 1/4/19 aw

(8) Re-run DX with SGT 1/9/19 aw

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

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

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

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

Turn-around Time:
- [x] Standard
- [ ] 3 Day
- [ ] 2 Day
- [ ] Next Day
- Same Day ____ (specify)

| | | | |
|---|---|---|---|
| Relinquished x | Date/Time 12/27/18 1450 | Received x | Date/Time 12/28/18 1455 |
| Relinquished x | Date/Time | Received x | Date/Time |

# ATTACHMENTS

**Permission and Conditions for Use and Copying Form**

**Groundwater-Sampling Report, December 2018**
**Auburn Way Properties, 3025 and 3109 Auburn Way N**
**Auburn, WA 98002**

**G-Logics Project 01-1140-F**
**February 5, 2019**

G-Logics prepared the above-identified Document only for our Client and/or other user(s), as identified in the Document, for the purposes stated and subject to any identified and contractual limitations. Regulatory agencies may make additional "fair use" copies for internal and public use based on state and federal laws that do not violate copyright laws.

All other Requestors must obtain permission from G-Logics and our Client in order to avoid copyright violations. To request authorization for a copy of the Document, please read our conditions listed below, complete the Requestor section, and fax to G-Logics at 425-313-3074 for approval review.

- I recognize that G-Logics has prepared this Document only for their Client and/or other user(s), only for the purposes stated in the Document and subject to any identified and contractual limitations.
- My intended use of the Document is for general informational purposes only.
- I understand and accept that there may be limitations to the reliability of the Document's findings due to circumstances beyond the control of G-Logics, the limited scope of funding, and/or limitations inherent in the nature of the performed services.
- I agree not to rely on the Document as being comprehensive or inclusive of all possible site hazards and agree to defend, indemnify, and hold G-Logics harmless from and against any and all claims, damages, or liability which arise from or which are alleged to arise from my use of the Document. I also will compensate G-Logics for any time spent or expenses incurred by G-Logics in defense of any such claim.
- I agree not to provide the Document to any other person or organizations without prior authorization from G-Logics and their Client.




g-logics

I, the Requestor, have reviewed the above-identified conditions for copying/use of the Document, am familiar with the presented limitations of the provided services, and acknowledge my understanding and concurrence, as indicated by my signature below.

Requestor's Company _____

Mailing Address _____

City, State, Zip Code _____

Contact Name & Title _____

Signature & Date _____

Telephone & Fax Numbers _____

Planned Use of Document _____

_____

_____

With your information and signature above, please fax to G-Logics (425-313-3074) for approval review. G-Logics will share your request with our Client for their approval.

**Client Review and Acknowledgment of Use and Copying Request**

Per the notification of G-Logics, I, the Client, have reviewed this request for copying/use of this Document, have discussed the request with G-Logics, and grant my consent as indicated by my signature below.

Client Company _____

Client Contact Name & Title _____

Signature & Date _____

Telephone & Fax Numbers _____

**G-Logics review and Acknowledgment of Use and Copying Request**

Based on your concurrence with the above-presented conditions, approval of our Client, and our review of the information, G-Logics allows the Requestor to copy/use the above referenced Document for purposes stated. Additional fees may apply.

G-Logics Signature _____

Title _____

Date _____