g-logics

NW2922

Site Exploration
Burien Honda
15026 1st Avenue South
Burien, WA

Prepared for: Mr. Greg Rairdon
RC 1st Ave LLC
PO Box 2879
Kirkland, WA 98083

Prepared by: G-Logics, Inc.
40 2nd Avenue SE
Issaquah, WA 98027

Telephone: (425) 391-6874
Facsimile: (425) 313-3074

October 7, 2015

G-Logics Project 01-1003-A

g-logics

October 7, 2015

Washington Department of Ecology
Mr. Grant Yang
3190 160th Ave. SE
Bellevue, WA 98008-5452

Subject: **Request for NFA**
Site Name: Burien Honda
Site Address: 15026 1st Avenue South, Seattle, W A
Facility/Site No.: 59359661
Cleanup Site ID No.: 9839
VCP Project No.: NW2922

Dear Mr. Yang:

Attached, please find G-Logics report documenting an additional site exploration at the above-referenced property. This exploration was conducted to address Ecology's request for supplemental information regarding groundwater at the Site. Specifically, additional information was requested in your letter dated January 21, 2015. G-Logics also attended a meeting with you at your offices on August 13, 2015.

Based on the findings of this exploration work, soil and groundwater do not contain gasoline contaminants at detectable concentrations. Accordingly, with this supplemental information, G-Logics requests that Ecology grant the requested NFA for the Site.

Should you have any questions regarding this information, please contact us at your convenience.

Sincerely,
G-Logics, Inc.

Rory L. Galloway, LG, LHG
Principal

Zackary Wall, M.Sc.
Staff Geologist

cc Ken Lederman
Greg Rairdon

TABLE OF CONTENTS

EXECUTIVE SUMMARY

At the request of RC 1st Ave LLC, G-Logics has completed additional site sampling for the subject property. This sampling was requested by the Washington State Department of Ecology (Ecology), to support the pending request for a "No Further Action" (NFA) determination.

This sampling included two soil borings, completed near former underground storage tanks (USTs), advanced to a depth of 32 feet below the ground surface. Upon completion, temporary well screens also were placed in each boring for the collection of groundwater samples. Soil and groundwater samples were analyzed for gasoline-range organics (GRO) as well as Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) contaminants. GRO and BTEX contaminants were not detected in any of the analyzed samples.

Based on the results of this exploration, and information provided in previously published reports for this property, G-Logics concludes that an Unrestricted NFA is warranted. This conclusion is based on the following.

- The primary sources of petroleum contamination (two previous USTs) have been removed.
- A significant volume of petroleum-contaminated soil (secondary source) also has been removed.
- Confirmation soil samples collected by E3RA (2014) establish that the UST-related contaminated soil has been successfully removed from the Site.
- Recent sampling completed by G-Logics indicates deeper soil and groundwater are not contaminated.
- Additional sampling is not necessary to further confirm that all contamination has been removed and remediated in compliance with MTCA standards.

1.0 INTRODUCTION

At the request of RC 1st Ave LLC (RC), G-Logics has completed soil and groundwater sampling to assess for the possible presence of residual subsurface contamination following remedial excavation at the subject property (Burien Honda), located at 15026 1st Avenue South, in Seattle, WA (Figures 1 and 2). This work was performed in order to address Ecology-requests for supplemental information to support an NFA determination.

Our work was performed in accordance with our workplan dated August 18, 2015. The results of our site exploration are presented in this report and are subject to the presented limitations in this report.

2.0 BACKGROUND

The subject property is located on 1st Avenue South in Burien, Washington, south of the intersection between Washington State Routes 518 and 509. The property covers approximately two acres and contains four tax parcels. A Honda dealership and multiple automotive-service shops exist on the property. A 3,000-gallon gasoline tank and a 300-gallon waste oil tank were previously located at the property, but have been removed. These two USTs were apparently the source of subsurface contamination on the subject property, as described in the following documents.

- *Phase I Environmental Site Assessment Report, 15026 & 15010 1st Ave S and 112 & 119 S 150th St, Burien, Washington,* Prepared by E3RA, Inc., October 29, 2012
- *Phase II, Limited Site Investigation Report, 112 & 119 S 150th St and 15010, 15026 & 15040 1st Ave S, Burien, Washington,* Prepared by E3RA, Inc., April 14, 2014
- *Remediation Closeout Report, Burien Honda, 15026 1st Avenue South, Burien, Washington,* Prepared by E3RA, Inc., April 17, 2014
- *Department of Ecology Letter Regarding Further Action,* January 21, 2015

According to the Phase II Report (E3RA, 2014), petroleum contamination was detected in soil and groundwater in the vicinity of two previous USTs. The USTs were located east of the current Honda car-dealership showroom and service building (Shown on Figure 2). One boring (B-2 on Figures 2 and 2a) was drilled directly beneath the location of the former gasoline UST. A temporary well screen was placed in this boring in order to sample groundwater. Gasoline-range organics (GRO) were detected in groundwater at a concentration of 1,600 µg/L, above the Model Toxics Control Act (MTCA) Method A cleanup level of 800 µg/L. Compiled tables of available analytical data for the Site are presented in Tables 1 and 2.

E3RA supervised the subsequent excavation and removal of contaminated soils from the Site. Confirmation soil samples collected from the excavation bottom and sidewalls did not find detectable amounts of petroleum hydrocarbons.

Groundwater was not resampled after the remedial excavation. E3RA concluded that groundwater was not significantly impacted because the sources of contamination were removed (tanks and contaminated soil), and because the groundwater sample only contained GRO in concentrations slightly above cleanup levels.

Based on the completed cleanup, an NFA determination was requested from Ecology. In a letter dated January 21, 2015, Mr. Grant Yang (Ecology Project Manager) stated that the groundwater was not sufficiently characterized during E3RA's Phase II Site Assessment.

As a follow-up to the Ecology letter, G-Logics attended a meeting with Mr. Yang on August 13, 2015. At this meeting, Ecology confirmed that additional groundwater samples would be needed to characterize the Site before it could be determined that no further action was required.

2.1 Regulatory Background

The rules that guide the cleanup process at sites within Washington are known as the Model Toxics Control Act (MTCA) Cleanup Regulation, which is administered by the Washington Department of Ecology (Ecology). MTCA "establishes administrative processes and standards to identify, investigate, and cleanup facilities where hazardous substances have come to be located" (WAC 173-340-100).

Soil and groundwater Cleanup Levels promulgated under MTCA are often used as standards for deciding when additional investigation or cleanup is appropriate. For this project, we have compared analytical laboratory results to published MTCA Method A Cleanup Levels for soil and groundwater.

3.0 SITE EXPLORATION ACTIVITIES

To address Ecology requests, and based on the results of previous exploration and remediation of soil and groundwater on-site, two soil borings were advanced at the subject property to a depth of 32 feet on September 2, 2015. In order to assess the groundwater quality within the areas of concern, the exploratory soil borings were completed as

temporary groundwater sampling wells. This allowed for the collection of representative groundwater samples.

Exploration work conducted at this property is further described below. A description of our site-exploration methods is presented in Appendix A. The boring logs are presented in Appendix B. Each log presents soil types and descriptions, field-screening observations, and a schematic of the temporary monitoring well installed.

3.1 Underground Utility Clearance

Before conducting the site exploration, G-Logics contacted public and private utility-locating services. Applied Professional Services identified subsurface utility locations by marking their inferred location on the ground surface. This information was used to aid in selecting boring locations (described below).

3.2 Soil Borings

Our drilling subcontractor (Holocene Drilling) used truck-mounted probe equipment (direct-push) to complete the borings. A G-Logics geologist was present during the exploration to observe and document site conditions.

Boring GL-B-1 was located as close as possible to where E3RA advanced boring B-2, in order to test for any residual groundwater contaminants. A second boring, GL-B-2, was advanced approximately 90 feet south of GL-B-1, in the assumed direction of groundwater flow, to test for any downgradient groundwater contaminants. Boring locations are shown on Figures 2, 2a, and 3.

3.3 Temporary Groundwater Monitoring Wells

Groundwater samples were collected from the temporary well screens placed in the open borings. Results of these analyses are presented in Section 4.2 of this report. After sample results were returned, the well casing and screen were removed from each boring, the holes were back-filled with bentonite, and the ground surface was restored with an asphalt patch.

4.0 SITE EXPLORATION OBSERVATIONS AND FINDINGS

The findings of this site exploration are presented below. Summaries of the analytical results obtained during this exploration, as well as from previous explorations, are presented on Tables 1 and 2. The analytical laboratory reports for the analyzed soil and groundwater samples are attached as Appendix C of this report. Chain-of custody forms are also included in Appendix C.

4.1 Soil Boring Findings

Boring GL-B-1 generally encountered moderately dense silty fill to a depth of 12 feet and a hard, competent mixture of silty sand and gravel from 12 feet to the explored depth of 32 feet. Boring GL-B-2 generally encountered hard, light brown, silty, medium-to-coarse-grained sand with trace amounts of gravel to the explored depth of 32 feet. During drilling, soil samples were collected for soil identification and chemical analysis. Refer to the site diagram on Figure 2 for sampling locations.

Selected soil samples were submitted to the on-site mobile analytical laboratory and analyzed for GRO and BTEX by NWTPH-Gx and EPA method 8260. GRO and BTEX were not found to be present at concentrations above the laboratory detection limits in any of the analyzed samples (Table 1).

4.2 Temporary Monitoring Well Findings

G-Logics encountered groundwater in both borings at an approximate depth 29 feet, in a layer of coarse-grained silty sand. This finding corresponds to groundwater-depth information presented in E3RA's 2014 report. Upon completion of our two borings, Holocene Drilling placed temporary well screens at depths between 28 and 32 feet.

Groundwater samples were collected and submitted to the on-site mobile analytical laboratory for GRO and BTEX analysis by NWTPH-Gx and EPA method 8260, respectively. GRO and BTEX were not detected at concentrations above the laboratory detection limits in any of the analyzed samples (Table 2).

5.0 QUALITY ASSURANCE/QUALITY CONTROL

Quality Assurance/Quality Control (QA/QC) included generally-accepted procedures for sample collection, documentation, and analysis. Appropriate chain-of-custody documentation also was completed. In addition, one blind-duplicate soil sample and one blind-duplicate groundwater sample were submitted to the laboratory for data-repeatability information.

6.0 CONCLUSIONS

Information regarding the exploration findings and our conclusions concerning the potential presence of residual groundwater contamination on the subject property are presented below. These conclusions are based on the findings of G-Logics explorations as well as previous studies and remedial efforts.

- E3RA managed the remedial excavation of contaminated soil in the vicinity of two previously removed USTs. Confirmation samples collected by E3RA demonstrated that all contaminated soil was successfully removed from the Site.
- G-Logics collected supplemental soil and groundwater samples from locations beneath and downgradient of the former USTs.
- Soil and groundwater samples collected by G-Logics did not contain detectable concentrations of GRO or BTEX.
- These results confirm that deeper soil and groundwater is not contaminated at the Site, indicating that the E3RA remediation was successful at removing all soil and groundwater contamination.
- The characterization of the Site is now complete, further sampling or remedial action is not necessary, and the issuance of an Unrestricted NFA is appropriate.

7.0 LIMITATIONS

The scope of work on this project was presented in our identified workplan and subsequently approved by RC. 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.

This report is prepared for the sole use of our client. The scope of services performed during this project 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). Our client and regulatory agencies also may make additional copies of this document for their internal and public use, or as required by law. All other users of this document must acknowledge our copyright and indicate that permission to use has been received from G-Logics and our Client. 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.

Permission and Conditions for Use and Copying Form

Site Exploration
Burien Honda, 15026 1st Avenue South
Burien, WA

G-Logics Project 01-1003-A
October 7, 2015

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.

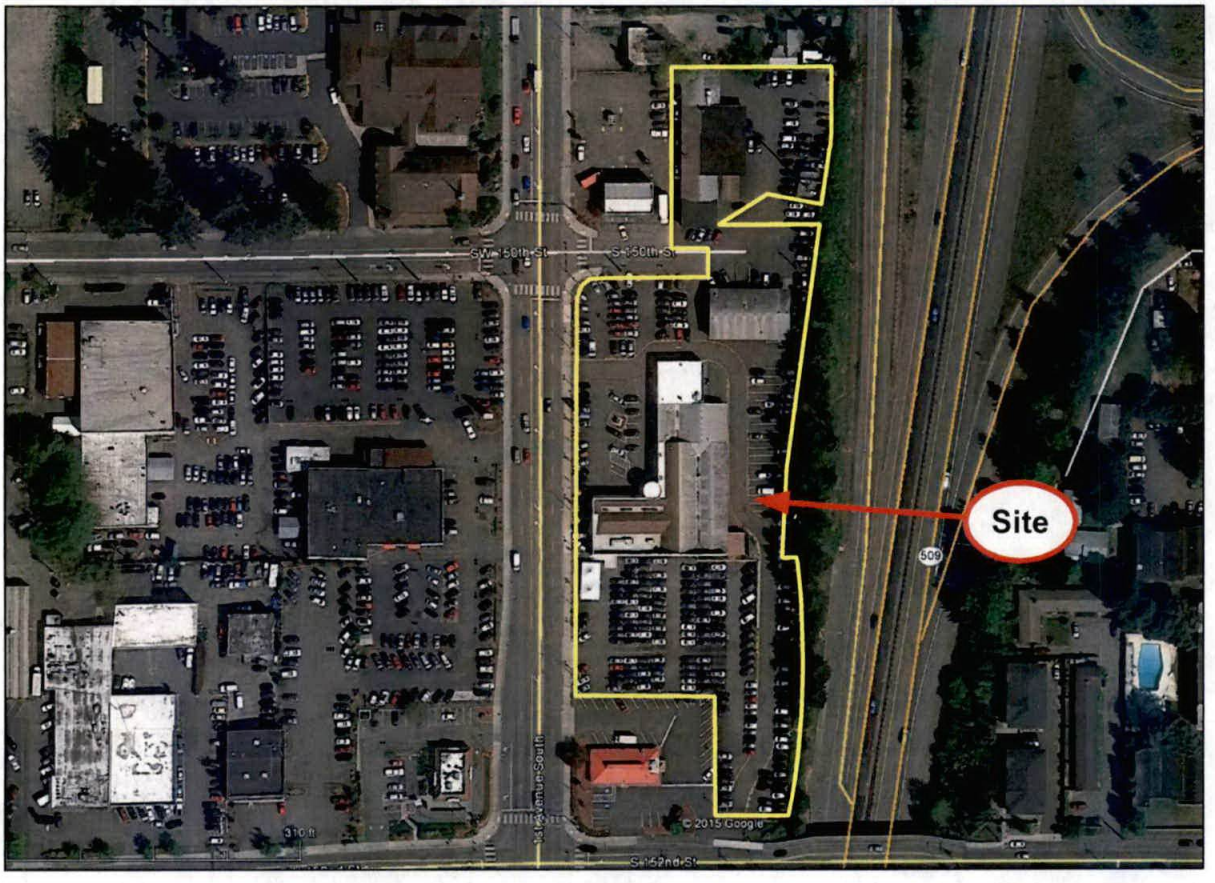
G-Logics Signature _____

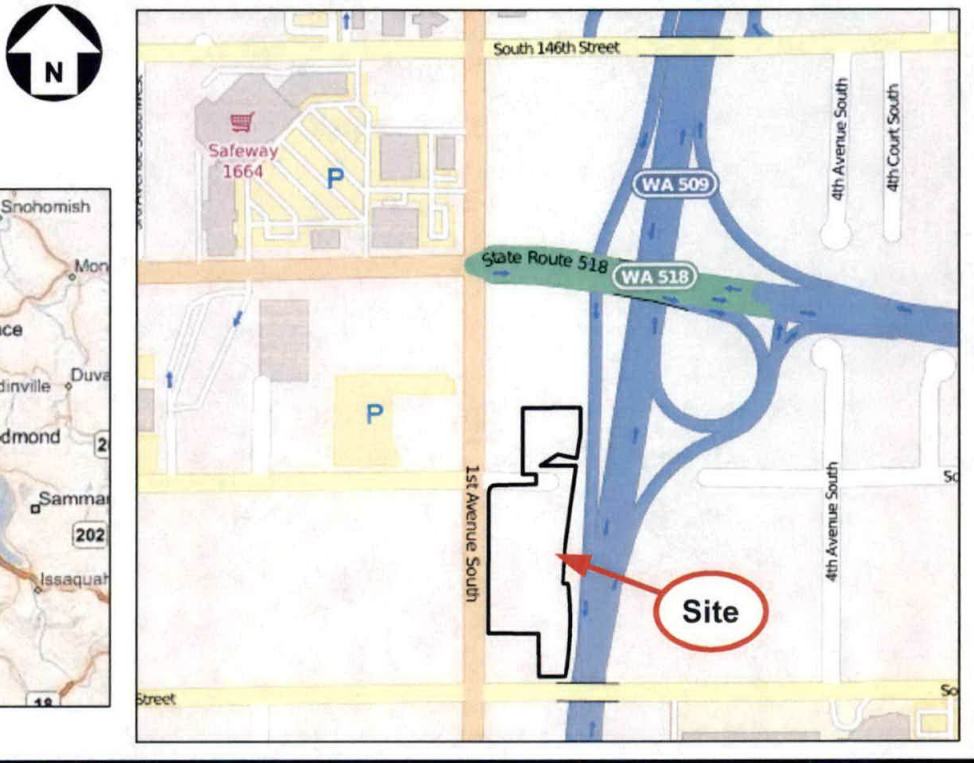
Title _____

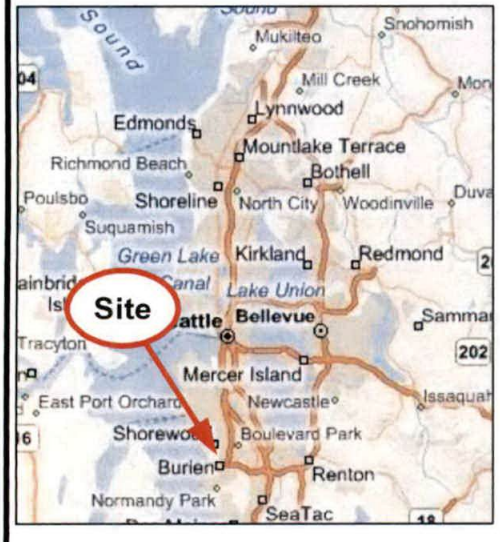
Date _____

g-logics

FIGURES







Project File: 01-1003-A-F1.vsd

g-logics

Site Location Maps

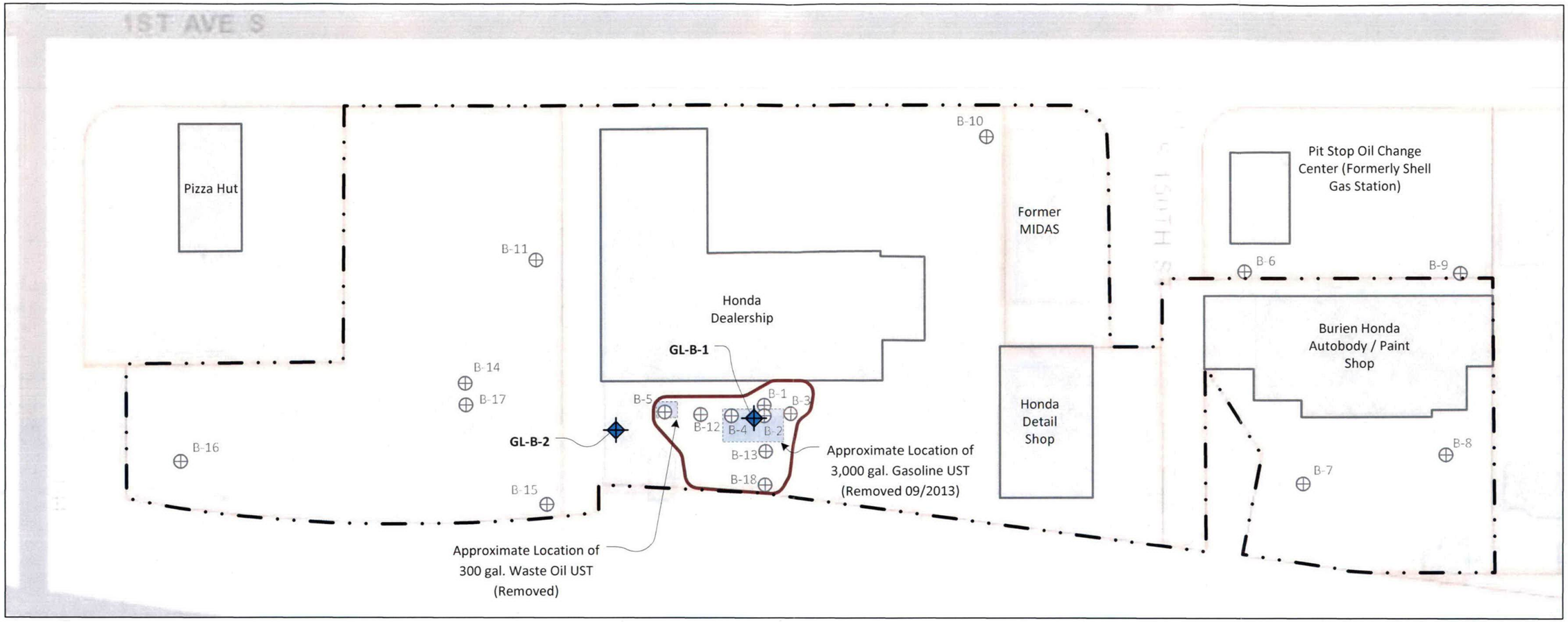
Honda of Burien

15026 1st Avenue South

Burien, Washington

Figure 1

Mapping Reference: King County, City of Burien, Digital Globe.



Legend

- Subject Property Boundary
- Approximate Outline of Existing Structures
- Approximate Areas of Suspected Storage Tanks
- Approximate Area of Remedial Excavation (E3RA, 2013)
- G-Logics Soil Boring and Temporary Well
- B-17 Soil Boring (E3RA, 2012)

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

Approximate Drawing Scale: 1" = 60'

0 ft. 36 ft. 60 ft. 120 ft.

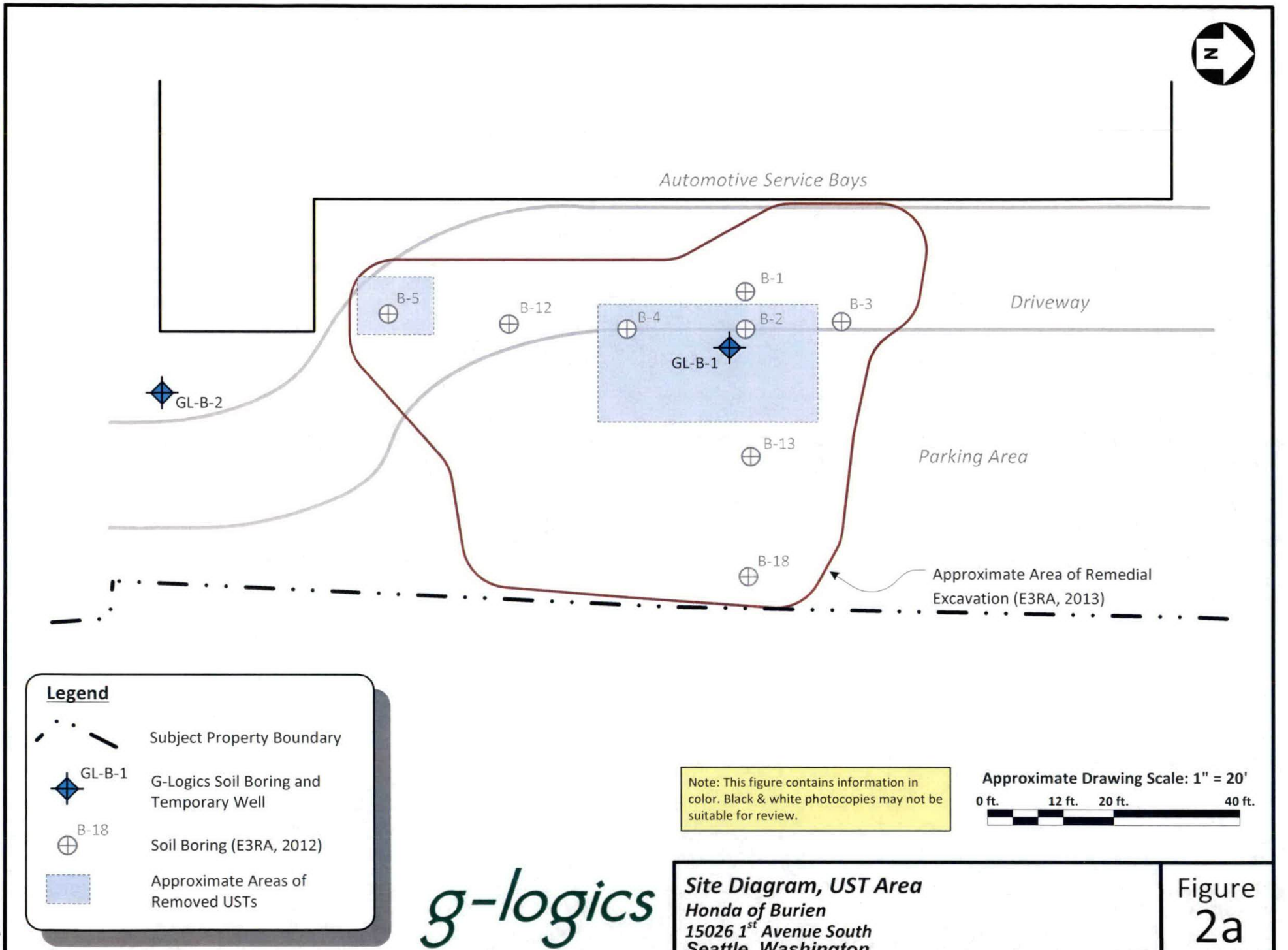
g-logics

Site Diagram, Exploration Locations
Honda of Burien
15026 1st Avenue South
Burien, Washington

Figure 2

Project File: 01-1003-A-F2.vsd

Mapping Reference: King County – City of Burien Aerial Imagery; E3RA LSI Phase II Report; G-Logics Field Measurements.



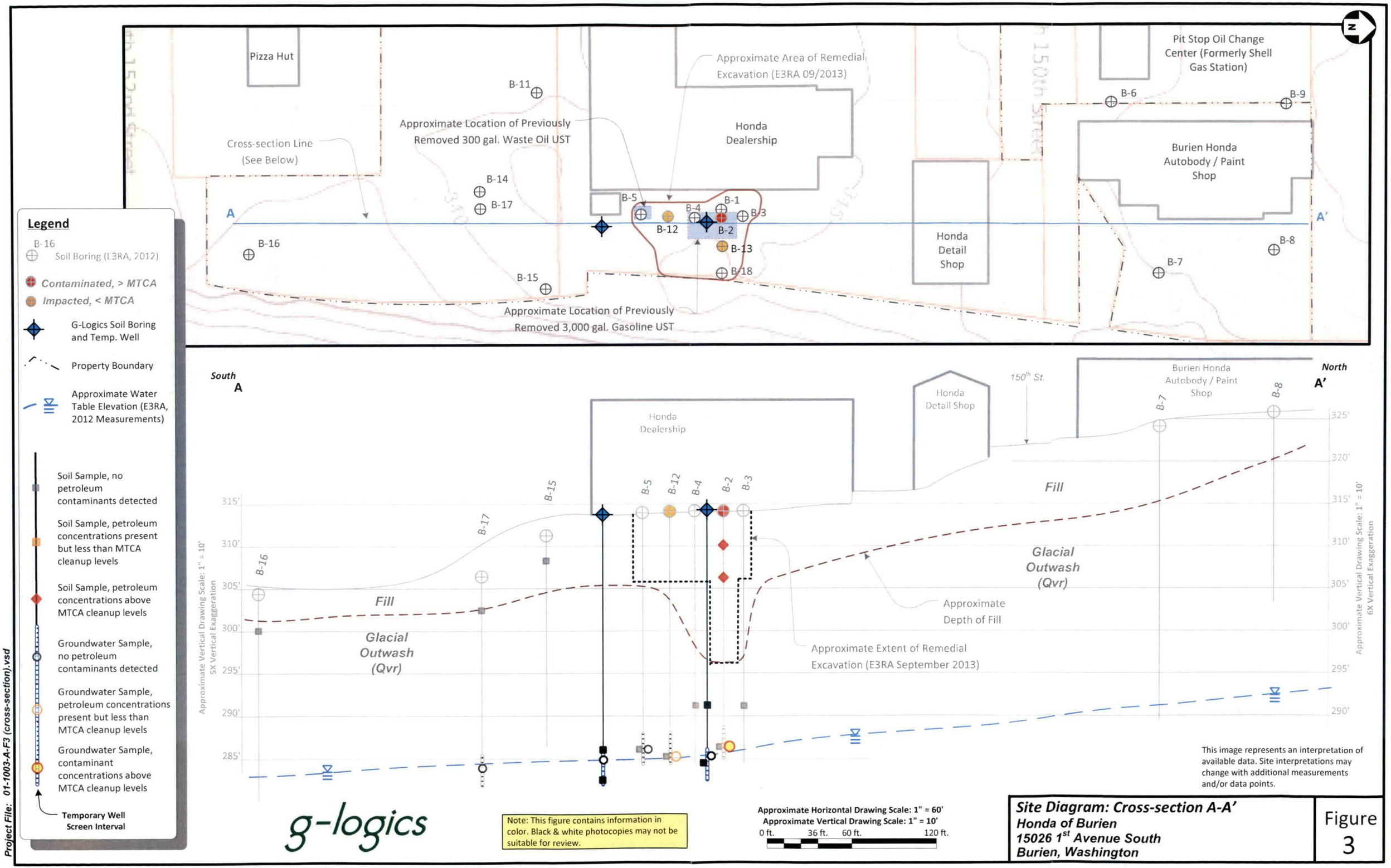
g-logics

Site Diagram, UST Area
Honda of Burien
15026 1st Avenue South
Seattle, Washington

Figure 2a

Project File: 01-1003-A-F2a.vsd

Mapping Reference: King County - City of Burien; E3RA, 2014. LSI Phase II Addendum; G-Logics Field Measurements.



Site Diagram: Cross-section A-A'
Honda of Burien
15026 1st Avenue South
Burien, Washington

Figure 3

Project File: 01-1003-A-F3 (cross-section).vsd

Mapping Reference: King County iMap; E3RA Phase II Report Boring Logs (2014); E3RA Remediation Closeout Report (2014); G-Logics Field Measurements.

TABLES

TABLE 1
Compiled Soil Sample Analyses Summary (1, 2)
Burien Honda

Exploration Location	Sample Number	Depth (feet)	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil	Lead	Arsenic	Cadmium	Chromium 6	Chromium 3	Mercury	Naphthalene	Phenol	PCB
(mg/kg)																		
E3RA, Inc.																		
October, 2012 (Phase II LSI)																		
B-1	B1 S1 - 10'	10	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	nd	nd	---
B-2	B2 S1 - 4'	4	nd	nd	0.1	1.2	180	---	---	---	---	---	---	---	---	1.2	---	---
	B2 S2 - 8'	8	0.04	4.8	5.5	31	1,400	---	---	---	---	---	---	---	---	---	---	---
	B2 S3 - 28'	28	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	nd	nd	---
B-3	B3 - 23'	23	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---
B-4	B4 S1 - 23'	23	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---
B-5	B5 - 28'	28	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---
B-6	B6 - 33'	33	nd	nd	nd	nd	nd	nd	nd	nd	---	nd	---	16	---	nd	nd	---
B-7	N/A	N/A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-8	N/A	N/A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-9	N/A	N/A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
B-10	B10 S2 -31'	31	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	nd	nd	---
B-11	B11 S1 - 3.5'	3.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	39	nd	nd	nd	---
B-12	B12 - 29'	29	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---
B-13	B13 - 29'	29	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---
B-14	N/A	N/A	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MTCA Cleanup Level*			**0.03**	**7**	**6**	**9**	**100(a)/30(b)**	**2,000**	**2,000**	**250**	**20**	**2**	**19**	**2,000**	**2**	**5**	**NE**	**1**

TABLE 1
Compiled Soil Sample Analyses Summary (1, 2)
Burien Honda

Exploration Location	Sample Number	Depth (feet)	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil	Lead	Arsenic	Cadmium	Chromium 6	Chromium 3	Mercury	Napthalene	Phenol	PCB
(mg/kg)																		
B-15	B15 S1 - 3'	3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	**26**	nd	nd	nd	---
B-16	B16 S1 - 4.5'	4.5	nd	nd	nd	nd	nd	nd	nd	**16**	nd	nd	nd	**23**	nd	nd	nd	---
B-17	B17 S1 - 4'	4	nd	nd	nd	nd	nd	nd	nd	nd	**11**	nd	nd	**28**	nd	nd	nd	---
B-18	B18 - 29'	29	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---
September 3-9, 2013 (UST Excavation Confirmation Samples)																		
1	1	7	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
	1	8	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
	1	10	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
2	2	6	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
	2(Interim)	7	**0.03**	**0.78**	**0.16**	**0.86**	**11**	nd	nd	nd	---	---	---	---	---	---	---	---
	2	12	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
3	3	7	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
	3	13	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
4 (Interim)	4(Interim)	10	nd	**0.13**	nd	**0.19**	**16**	nd	nd	nd	---	---	---	---	---	---	---	---
	4(Interim)	13	nd	nd	**0.14**	**0.17**	**10**	nd	nd	nd	---	---	---	---	---	---	---	---
5(Interim)	5(Interim)	13	nd	nd	**0.13**	**0.27**	nd	nd	nd	nd	---	---	---	---	---	---	---	---
6	6	13	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
	6	15	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
7	7	8	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
	7	15	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
8	8	15	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
9	9	15	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
10	10	8	nd	**0.07**	**0.10**	**0.86**	nd	nd	nd	nd	---	---	---	---	---	---	---	---
11	11	9	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
MTCA Cleanup Level*			**0.03**	**7**	**6**	**9**	**100(a)/30(b)**	**2,000**	**2,000**	**250**	**20**	**2**	**19**	**2,000**	**2**	**5**	**NE**	**1**

TABLE 1
Compiled Soil Sample Analyses Summary (1, 2)
Burien Honda

Exploration Location	Sample Number	Depth (feet)	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil	Lead	Arsenic	Cadmium	Chromium 6	Chromium 3	Mercury	Naphthalene	Phenol	PCB
(mg/kg)																		
12	12	7	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
13	13	18	nd	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---
September 9, 2013 ("Clean Overburden Soils" from Burien Honda UST excavation)																		
1	1	Grab	nd	nd	nd	nd	nd	nd	nd	**6.1**	---	---	---	---	---	---	---	---
2	2	Grab	nd	nd	nd	nd	nd	nd	nd	**7.7**	---	---	---	---	---	---	---	---
3	3	Grab	nd	nd	nd	nd	nd	nd	nd	**6.1**	---	---	---	---	---	---	---	---
4	4	Grab	nd	nd	nd	nd	nd	nd	nd	**10.0**	---	---	---	---	---	---	---	---
5	5	Grab	nd	nd	nd	nd	nd	nd	nd	**5.3**	---	---	---	---	---	---	---	---
G-Logics, Inc.																		
September, 2015																		
GL-B-1	GL-B-1-23'	23	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---	---	---
	GL-B-1-30'	30	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---	---	---
GL-B-2	GL-B-2-28'	28	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---	---	---
	GL-B-2-31'	31	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---	---	---
MTCA Cleanup Level*			**0.03**	**7**	**6**	**9**	**100(a)/30(b)**	**2,000**	**2,000**	**250**	**20**	**2**	**19**	**2,000**	**2**	**5**	**NE**	**1**

Notes:
1 Refer to site diagrams for sampling locations.
2 See attached lab reports for analytical methods.
* Available Method A and/or Method B Soil Cleanup Levels (mg/kg) for Unrestricted Land Use, MTCA Amendments adopted in November 2013.
a Soil Cleanup Level For Gasoline With No Detectable Benzene In The Soil
b Soil Cleanup Level For Gasoline With Detectable Benzene In The Soil.
nd Not Detected, concentration less than the laboratory method detection limit
--- Not Analyzed.
23 Bold Number(s) Indicates Contaminant Detected
23 Bold Number and Yellow Shading Indicates Concentration Exceeds MTCA Cleanup Level Defined in Footnote 2.
NE MTCA Method A Cleanup Level Not Established For This Analyte.

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

TABLE 2
Groundwater Depth and Sample Analysis Summary (1, 2)
Honda of Burien

Exploration Location	Sample Number	Depth (feet)	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil	Lead	Cadmium	Chromium	Arsenic	Silver	Barium	Selenium	Mercury	Napthalene	Phenol
(mg/kg)																			
E3RA, Inc.																			
October, 2012 (Reported in Phase II LSI, dated 4/14/2014)																			
B-2	B2-28'	28	**1**	**44**	**40**	**200**	**1,600**	nd	nd	---	---	---	---	---	---	---	---	**10**	nd
B-5	B5-28'	28	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	nd	nd
B-6	B6-33'	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	**11**	**2.2**	nd	**49**	nd	nd	nd	nd
B-10	B10-33'	33	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
B-12	B12-29'	29	nd	**1**	nd	nd	**430**	nd	nd	---	---	---	---	---	---	---	---	**4.9**	nd
B-13	B13-29'	29	nd	**2.6**	**8.8**	**31**	**100**	nd	nd	---	---	---	---	---	---	---	---	nd	nd
B-17	B17 S2 - 22.5'	22.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	**3.2**	nd	**35**	nd	nd	nd	nd
B-18	B18 - 29'	29	nd	nd	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	nd	nd
G-Logics, Inc.																			
September, 2015																			
GL-B-1	GL-B-1-W-1	29	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---	---	---	---
GL-B-2	GL-B-2-W-2	28.9	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---	---	---	---
Blind Duplicate	GL-B-2-W-D	---	nd	nd	nd	nd	nd	---	---	---	---	---	---	---	---	---	---	---	---
MTCA Cleanup Level*			**5**	**1,000**	**700**	**1,000**	**1,000(a)/800(b)**	**500**	**500**	**15**	**5**	**50**	**5**	**NE**	**NE**	**NE**	**2**	**160**	**NE**

Notes:
1 Refer to site diagrams for sampling locations.
2 See attached lab reports for analytical methods.
* Available Method A and/or Method B Soil Cleanup Levels (mg/kg) for Unrestricted Land Use; MTCA, Amendments adopted in November 2013.
a Soil Cleanup Level For Gasoline With No Detectable Benzene In The Soil.
b Soil Cleanup Level For Gasoline With Detectable Benzene In The Soil.
nd Not Detected, concentration less than the laboratory method detection limit.
--- Not Analyzed.
23 Bold Number(s) Indicates Contaminant Detected.
23 Bold Number and Yellow Shading Indicates Concentration Exceeds MTCA Cleanup Level Defined in Footnote 2.
NE MTCA Method A Cleanup Levels not established.

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

APPENDIX A

APPENDIX A

FIELD EXPLORATION METHODS

G-Logics performed subsurface soil and groundwater sampling during the site exploration conducted on the subject property. The sampling activities were conducted in general accordance with Ecology's guidelines and regulations.

Underground Utility Clearance

Before conducting the subsurface exploration, G-Logics contacted a service that notifies public utilities of proposed subsurface investigations. Additionally, on-site private utilities were located by a private locating company to identify on-site utilities as well as specific areas of concern. Consequently, the below-grade utility locations were identified by marking their inferred location on the ground surface. This information was used to aid in identifying sampling locations.

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 with a detergent wash and tap water rinse before the collection of the samples. All samples were labeled with a sample number, date, time, and sampler name, and were immediately submitted to an on-site mobile analytical laboratory after collection..

Direct Push Soil Sampling

A probe subcontractor (Holocene Drilling) performed the probe drilling at this site. The truck-mounted equipment used for this work consisted of a 2-inch stainless steel sampler (sealed piston sampler), in lengths of four feet. Continuous soil samples were obtained by driving/pushing this sampler, containing an acrylic liner, to the sampling depth. After reaching the required depth, the probe was retrieved and opened. The collected soils contained within the acrylic liner were removed and placed into laboratory-provided glass jars. Samples were collected from the soil core using an Easy Draw Syringe and Powerstop

Handle. The soil plug was then extruded into a laboratory-supplied unpreserved 40 ml VOA Vial. The extracted sampler was washed and new liners were used for each sampling attempt.

The soils were then observed and categorized for grain-size, color, presence of artifacts, moisture, odor, staining, sheen, and any other indications of contamination. This information was recorded on field boring logs (attached). Samples were collected where indications of contamination were observed or from where contamination would likely be present (i.e. at the groundwater interface).

Upon completion of each soil boring a temporary well screen was installed. After groundwater sampling, the resulting hole was backfilled with bentonite (hydrated with a small amount of water) and the ground surface restored to match original. All soil cuttings were collected and placed into a waste drum for proper disposal (determined by analytical results).

Collected samples were labeled with a sample number, date, time, and sampler's name and submitted to an on-site mobile analytical laboratory. Chain-of-custody procedures were followed to document sample handling.

Well Development

After monitoring well construction and prior to purging the wells for sampling, the wells were developed. Over pumping, or removing water from the well at a rapid rate, was the devolvement technique used. Well development continued until the initially turbid water turned nearly clear. This process was repeated until approximately ten well casings of groundwater had been removed.

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 on the water level meter 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.

Temporary Groundwater Monitoring Well Construction

Soil borings completed as temporary groundwater monitoring wells were constructed in the following manner:

- The well casing materials consisted of 0.75-inch, inside diameter, flush-threaded, schedule 40 PVC pipe.
- The screened interval of the well casing was perforated with 0.020-inch factory-cut slots.
- All PVC casing materials were factory-cleaned before installation.
- The bottom of the well casing was sealed with a threaded cap. Blank (non-slotted) riser casing was used to extend the well from the top of the screened interval to ground surface. The length of the screened interval is identified on the boring logs.
- Well construction was accomplished by lowering the casing into the direct-push drill pipe. The drill pipe was then withdrawn from the boring, leaving the casing in place.

Groundwater Grab 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, 10 volumes of water were removed from the well casing prior to collection of samples.
- 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 immediately submitted to an on-site mobile analytical laboratory. Chain-of-custody procedures were followed to document sample handling.
- Dedicated tubing was used at each sampling location.

APPENDIX B

Unified Soil Classification System (USCS)

PRIMARY DIVISIONS			SYMBOL	DESCRIPTIONS
COARSE GRAINED SOILS Sands & Gravels, Over 50% retained on #200 sieve	**GRAVELS** Over 50% of coarse material retained on #4 sieve	**CLEAN GRAVEL** Less than 5% passing #200 sieve	GW	Well graded gravel, many different particle sizes, little or no fines
			GP	Poorly graded, few different particle sizes, little or no fines
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SAND Over 50% of coarse material passed #4 sieve	**CLEAN SANDS** Less than 5% passing #200 sieve	SW	Well graded gravel, many different particle sizes, little or no fines
			SP	Poorly graded, few different particle sizes, little or no fines
		SAND WITH FINES	SM	Silty gravels, gravel-sand-silt mixtures
			SC	Clayey gravels, gravel-sand-clay mixtures
FINE GRAINED SOILS Silts & Clays, Over 50% passing the #200 sieve	**SILTS AND CLAYS** Liquid limit is less than 50 %		ML	Inorganic silts, slight to no plasticity
			CL	Inorganic clays, low to moderate plasticity
			OL	Organic silts and clays of low plasticity
	SILTS AND CLAYS Liquid limit is more than 50 %		MH	Inorganic silts, moderate to high plasticity
			CH	Inorganic clays, high plasticity, fat clays
			OH	Organic silts and clays of high plasticity
Highly Organic Soils			PT	Peat and other highly organic soils

Soil Samples

- Disturbed, bag, bulk, or grab sample
- Standard penetration split spoon sample
- Cuttings
- Continuous-Core Sample

Field Measurements

▽	Water Level Observed During Drilling
PID	Photoionization Detector
ppmv	Parts Per Million by Volume
▽	End of Boring (E.O.B)

Note: Blows per foot is the number of blows used to drive a split-spoon (2" OD) sampler through the last 12 inches of an 18-inch sampling attempt. One blow is a 30-inch fall of a 140-pound hammer.

Note: The line separating strata on the logs represents approximate boundaries only. The actual transition may be gradual. No warranty is provided as to the continuity of the strata between exploration locations. Logs represent the soil section observed at the exploration location on the date of exploration only.

ExplorationLogLegend.pub

g-logics

Exploration Log Legend

01-1003-a gl-b-1.vsd

BLOWS/6 inches	INTERVAL	SAMPLE NUMBER	SOIL DESCRIPTION	Recovery %	USCS	PID (ppmv in headspace)	WELL CONSTRUCTION
			6" Asphalt Pavement				2" Dia. Boring
			6"-4 – Silty sand w/ trace gravel, light brown, fill, no petroleum odor or visible staining observed.	75			Asphalt Patch
			4'-5' – Silty sand w/ trace gravel, light brown, fill, no petroleum odor or visible staining observed.	50	Fill		0.75" PVC Blank
			5'-12' – Clay and silty sand w/ occ gravel, brown, med-firm, plastic, no petroleum odor or visible staining observed.	25			
			12'-14' – Clay and silt, firm to hard, 2" interlayers of coarse sand. No petroleum odor or visible staining obs.	75	ML		Bentonite Seal
			14'-16' – Coarse-grained sand w/ trace gravel, soft		SP		
			16'-20' – Medium-coarse-grained silty sand, very hard, dry, brittle, no petroleum odor or visible staining observed.	10			10/20 Sand
			20'-22' – Driller switched to expendable bit. Silty sand, brown, hard.	100			
		GL-B-1-23'	22'-24' – Med-coarse-grained silty sand, firm, sl petroleum odor.		SM		
			24'-28' – Med-coarse-grained silty sand, brown-tan, firm, dry	100			1.4" O.D. (0.75" I.D.) Well Screen (10 slot)
			28'-29' – Coarse sand, lt brown firm				
		GL-B-1-W-1	Groundwater at 29.0'				
		GL-B-1-30'	29'-32' – Med-grained silty sand, brown, wet	100			
			E.O.B. at 32 feet				

0 5 10 15 20 25 30 — Depth in feet

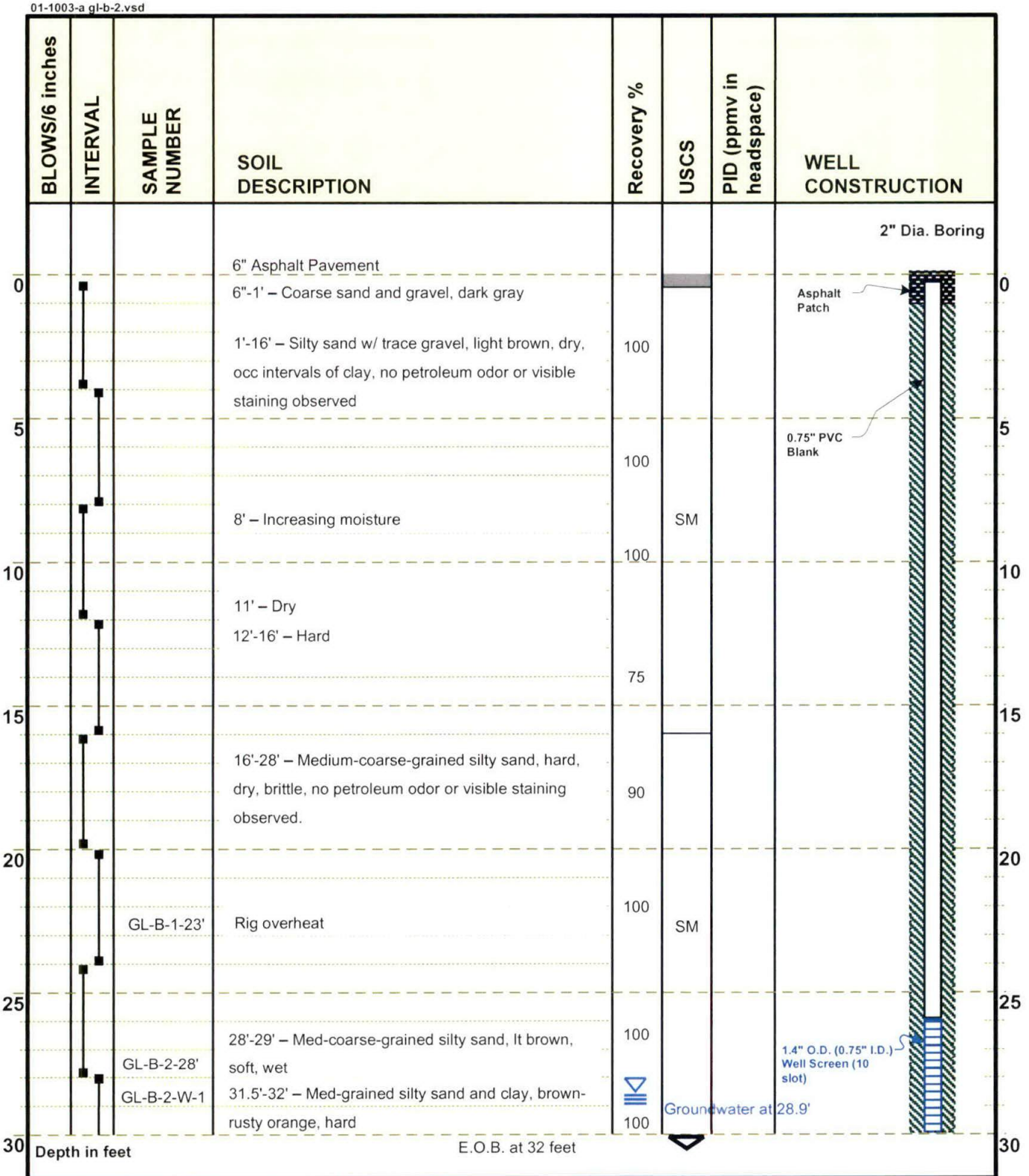
Drilling Method: Direct-Push	Date: 9/2/2015	Other Information:
Drilling Company: Holocene	Weather: Cool, Overcast	Temporary Well (Abandoned 9/2/2015)
Boring Diameter: 2-inches	Page 1 of 1	
Logged By: Z. Wall		

g-logics

Boring/Well Log
Burien Honda
15026 1st Ave S
Burien, Washington

GL-B-1

01-1003-a gl-b-2.vsd



Drilling Method: Direct-Push	Date: 9/2/2015	Other Information:
Drilling Company: Holocene	Weather: Sunny, Scattered Rain Squalls	Temporary Well (Abandoned 9/2/2015)
Boring Diameter: 2-inches	Page 1 of 1	
Logged By: Z. Wall		

g-logics

Boring/Well Log
Burien Honda
15026 1st Ave S
Burien, Washington

GL-B-2

APPENDIX C

Libby Environmental, Inc.

4139 Libby Road NE • Olympia, WA 98506-2518

September 7, 2015

Zak Wall
G-Logics
40 2nd Avenue SE
Issaquah, WA 98027

Dear Mr. Wall:

Please find enclosed the analytical data report for the Burien Honda Project located in Burien, Washington.

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

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

Sincerely,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

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

Libby Environmental, Inc.

Chain of Custody Record

www.LibbyEnvironmental.com

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Date: 9/2/15 Page: 1 of 1

Client: G-Logics
Project Manager: ZAK WALL
Address: 40 2nd Ave SE
Project Name: BURIEN HONDA
City: Issaquah State: WA Zip: 98027
Location: 15026 1st Ave S 98148 City, State: Burien, Wa
Phone: 425-391-6874 Fax:
Collector: Zak Wall Date of Collection: 9/1/15
Client Project # 01-1003-A
Email: ZackaryW@g-logics.com

Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCA 5 Metals	RCRA 8 Metals			Field Notes
1 ~~GL-5B-F~~ GL-B-1-23'	23'	9:45	S	VOA/4oz		X	X												
2 GL-B-1-30'	30'	10:30	S	VOA/4oz		X	X												
3 GL-B-1-W-1	29'	10:41	W	2 VOA		X	X												
4 GL-B-2-28'	28'	12:45	S	VOA/4oz		X	X												
5 GL-B-2-D	28'	12:45	S	VOA/4oz		X	X												
6 GL-B-2-31'	31'	13:00	S	VOA/4oz		X	X												
7 GL-B-2-W-1	28.9'	14:00	W	2 VOA		X	X												
8 GL-B-2-W-D	28.9'	14:05	W	2 VOA		X	X												
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			

Relinquished by:	Date / Time	Received by:	Date / Time
ZK Wall	9/2/15 2:15	Kodey Eley	9/2/15 2:15
Relinquished by:	Date / Time	Received by:	Date / Time
Relinquished by:	Date / Time	Received by:	Date / Time

Sample Receipt

Good Condition? (Y) N
Temp. °C
Seals Intact? (Y) N N/A
Total Number of Containers 16

Remarks: ML

TAT: 24HR 48HR 5-DAY

Distribution: White - Lab, Yellow - File, Pink - Originator

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

BURIEN HONDA PROJECT
G-Logics
Burien, Washington
Libby Project # L150902-30
Client Project # 01-1003-A

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	9/2/15	nd	nd	nd	nd	nd	101
LCS	9/2/15	110%	90%				118
GL-B-1-23'	9/2/15	nd	nd	nd	nd	nd	101
GL-B-1-23' Dup	9/2/15	nd	nd	nd	nd	nd	99
GL-B-1-30'	9/2/15	nd	nd	nd	nd	nd	108
GL-B-2-28'	9/2/15	nd	nd	nd	nd	nd	89
GL-B-2-D	9/2/15	nd	nd	nd	nd	nd	93
GL-B-2-31'	9/2/15	nd	nd	nd	nd	nd	90
GL-B-1-23' MS	9/2/15	110%	92%				104
GL-B-1-23' MSD	9/2/15	106%	90%				99
Practical Quantitation Limit		0.02	0.10	0.05	0.15	10	

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSIS PERFORMED BY: Kodey Eley

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

BURIEN HONDA PROJECT
G-Logics
Burien, Washington
Libby Project # L150902-30
Client Project # 01-1003-A

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Water

Sample Number	Date Analyzed	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	Gasoline (µg/l)	Surrogate Recovery (%)
Method Blank	9/2/15	nd	nd	nd	nd	nd	101
LCS	9/2/15	110%	90%				118
GL-B-1-W-1	9/2/15	nd	nd	nd	nd	nd	114
GL-B-1-W-1 Dup	9/2/15	nd	nd	nd	nd	nd	98
GL-B-2-W-1	9/2/15	nd	nd	nd	nd	nd	101
GL-B-2-W-D	9/2/15	nd	nd	nd	nd	nd	104
GL-B-1-W-1 MS	9/2/15	105%	90%				84
GL-B-1-W-1 MSD	9/2/15	107%	93%				79
Practical Quantitation Limit		1	2	1	3	100	

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Kodey Eley