February 3, 2017 ECI Project Number: 0359-01-03

Ms. Tracey Larson
5066 Southeast Hovgaard Road
Olalla, Washington 98359

Re: **Focused Subsurface Investigation**
14610 Purdy Drive Northwest
Gig Harbor, Washington 98332

Ms. Larson:

Pursuant to your recent request, EcoCon, Inc. (ECI) completed a Focused Subsurface Investigation (FSI) for the property located at 14610 Purdy Drive Northwest in Gig Harbor, Washington (the Property) (Figure 1, Appendix A). This FSI was conducted to evaluate the environmental quality of soil due to the Recognized Environmental Condition (REC) identified in ECI's Phase I Environmental Site Assessment, dated January 27, 2017. An excerpt from the report is as follows:

> *"The three waste oil* [Above Ground Storage Tanks] *ASTs were stored on the north side of the service garages and lacked secondary containment; potential drips and spills could be transported through stormwater runoff into a drainage ditch located to the southwest of the ASTs, following the western edge of the service garage structure. ECI also observed two exterior hydraulic hoists, without secondary containment, which pose a similar threat to the Property through petroleum transport into the drainage ditch."*

These site features were associated with a previous release on the Property, which was subsequently cleaned up, however the remedial activities took place nearly seven years ago, and similar conditions exist which present the possible transport of contaminants into that drainage trench. Therefore, ECI still considered this site feature to be a REC to the Subject Property.

This report details site history, site activities and observations, sampling activities, chemical analysis, and provides conclusions and recommendations for the Property. The approved scope of work for this project was:

- Development of a site work plan;
- Collection and laboratory analysis of soil samples; and
- Preparation of this report.

Appended to this report are the following:

- Appendix A: Project Figures;
- Appendix B: Project Analytical Results;

Property Location & Description

According to the Pierce County Assessor, the Property currently consists of a commercial lot, 0.36 acres in size, improved with two structures. Both structures are occupied by Gig Harbor Transmission. The service garage was reportedly constructed in 1951 with the second structure constructed in 1975.

Previous Environmental Activities

In 2009, the Tacoma Pierce County Health Department (TPCHD) visited the Property and collected soil samples from a drainage trench adjacent to the north Property boundary and a drainage trench on the western side of the main service garage. The soil samples collected contained concentrations of oil range organics (ORO), polynuclear aromatic hydrocarbons (PAHs), cadmium, and/or lead above their respective Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Use.

In January of 2010, a Phase I ESA was conducted by Alkai Consultants, LLC (Alkai). Within the Phase I ESA report, two RECs were identified. The first REC was associated with the contamination previously discovered by the TPCHD within the trenches on the Property. The second REC was associated with Environmental Cleanup Liens or Activity and Use Limitations filed against the Subject Property. ECI reviewed available records at the Pierce County Recorder's Office, and was not able to identify any Environmental Cleanup Lien or Activity and Use Limitations filed against the Subject Property.

The Alkai Phase I report also included details pertaining to the decommissioning of four Underground Storage Tanks (USTs) on the Property in 1989. According to Alkai, one 10,000 gallon UST, one 5,000 gallon UST, two 2,000 gallon USTs, and all of the associated piping and dispenser islands were tested for leaks prior to being decommissioned. The Petro Tite Tank Tester representative onsite reported that all four USTs and associated piping had no detectable leaks. During the decommissioning, no holes or damage was identified on the USTs and no contamination was discovered in the surrounding soil. Two soil samples were reportedly collected from the bottom of the tank pits and analyzed as verification, however, the laboratory analytical report was not included within the Alkai Phase I report that was reviewed. Groundwater was reportedly not encountered during the decommissioning of the USTs.

In February of 2010, the owner of the Property had the contaminated soil within the two trenches, previously identified by TPCHD, excavated and removed. Environmental Management Services (EMS) then performed a Focused Subsurface Investigation (FSI) to evaluate soil and groundwater on the Property for a significant release. EMS advanced six borings to depths between eleven (11) and fifteen (15) feet below ground surface (bgs) in strategic areas on the Property near potential sources of contamination. EMS collected eleven (11) soil samples and four groundwater samples from the six borings and also collected

five near surface soil samples from the excavated trenches (Figure 3; Appendix A). The samples were analyzed by Fremont Analytical in Seattle, Washington. Individual samples were selected to be analyzed for one or more of the following contaminants of concern (COCs): oil-range organics (ORO); diesel range organics (DRO); gasoline range organics (GRO); benzene, toluene, ethylbenzene, xylenes (BTEX); lead; chromium; cadmium; and polycyclic aromatic hydrocarbons (PAHs).

Soil and groundwater samples from the borings reported concentrations of COCs below their respective MTCA Method A Cleanup Levels, which supports the conclusion that a release from the UST system had not occurred. Soil samples collected from the drainage trench reported concentrations of COCs below their respective MTCA Method A Cleanup Levels, which confirms a successful remediation effort. However the conditions which resulted in the release were not addressed.

Physical Setting

According to the USGS, Burley, WA topographic map (2014), the central elevation of the Property is at approximately 50 feet above mean sea level (NAD83/WGS84). The ground surface (or topography) at the Property generally slopes towards the Burley Lagoon to the west and southwest. The vicinity of the Property also gradually slopes towards the Burley Lagoon to the west and southwest. (Figure 2, Appendix A).

The primary aquifers in the Puget Sound region are typically overlain by relatively impermeable glacial till deposits, that are present at or near the ground surface. Within these till deposits are localized areas or lenses of water-bearing sands and gravels that may result in a shallow, localized, perched water table. Lateral and vertical migration of shallow groundwater may be impeded by the relatively impermeable nature of the till and by the sometimes-discontinuous nature of the perched water-bearing sands and gravel. The soil on the Subject Property is reported as a Harstine gravelly sandy loam.

Regulatory Compliance

Regulatory compliance for this project is based on the Washington Administrative Code (WAC) 173-340 – Model Toxic Control Act (MTCA) - RCW Chapter 70.105D, implemented by the Washington State Department of Ecology (Ecology). Pursuant to Chapter 70.105D RCW, Ecology has established cleanup standards and requirements for the cleanup actions (MTCA). The rules establishing these standards and requirements were developed by Ecology in consultation with the Science Advisory Board (established under the Act) and with representatives from local government, citizen, environmental, and business groups. The rules were first published in February 1991, with amendments in January 1996, February 2001, and October 2007.

Contaminants of Concern (COCs)

Based on historical information gathered for the Property, the contaminants of concern (COCs) include: DRO, ORO, GRO, and BTEX.

Contaminant concentrations will be compared to the MTCA Method-A Cleanup Levels for soil (MTCA WAC 173-340-900, Table 740-1-Soil). These cleanup levels are presented below.

Table 1: Primary Contaminants of Concern

Method-A Cleanup Levels (MTCA-A) for Soil (MTCA Cleanup Regulation 173-340-900: Table 740-1)	
Contaminant of Concern (COCs)	**Soil Cleanup Levels - mg/kg**
Diesel Range Organics (DRO)	2,000
Oil Range Organics (ORO)	2,000
Gasoline Range Organics (GRO)	100/30[1]
Benzene	0.03
Toluene	7
Ethylbenzene	6
Xylenes	9

Sampling Activities

Site Work and Sample Collection

On January 24, 2017, ECI collected four (4) near surface soil samples (TN1-6, TN1-12; TS1-6; and TS2-6) using stainless steel hand tools (spade and trowel)(Figure 3, Appendix A). The sample locations were strategically selected along the trench lines, within the areas of concern previously identified by the TPCHD. The samples were collected at depths between 6 and 12 inches below ground surface (bgs).

Samples were transferred into new laboratory-provided analyte specific sample containers and assigned a unique sample ID. All hand tools were decontaminated in between uses using a liquinox and water mixture within a pressure washer, scrubbed using a non-abrasive soft bristle brush, then rinsed with distilled water.

Soil samples were placed in a climate controlled container and maintained at or below 4° Celsius until they were delivered to an Ecology accredited laboratory, Libby Environmental, of Olympia Washington, under industry standard chain of custody protocol.

[1] Gasoline Range Organics: Gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture has a soil CUL = 100 mg/kg. All other gasoline mixtures have a soil CUL = 30 mg/kg. For groundwater, the CUL is 1,000 ug/l for gasoline mixtures without benzene and 800 ug/l for all other gasoline mixtures.

Analytical Results

Soil Analytical Results

Four (4) soil samples were submitted to the laboratory and analyzed for one or more of the following COCs:

- GRO by NWTPH-Gx;
- BTEX by EPA Method 8260C; and/or
- DRO and ORO by Northwest Method NWTPH-Dx.

As summarized in the table below, soil sample TS1-6 contained a concentration of ORO above its MTCA Method Cleanup Level of 2,000mg/kg. The three remaining soil samples also contained concentrations of ORO, however they were below the MTCA Method A Cleanup Level. No other COC was detected above its respective laboratory reporting limit in any of the four samples.

Table 2: Summary of Soil Analytical Results

Sample ID	Sample Depth (inches bgs)	Gasoline	Diesel	Oil	Benzene	Toluene	Ethylbenzene	Xylenes
		Sample Results in milligrams per kilogram (mg/kg)						
TN1-6	6	--	<50	**1,040**	--	--	--	--
TS1-6	6	<10	<50	**3,440**	<0.02	<0.1	<0.05	<0.15
TS1-12	12	--	<50	**638**	--	--	--	--
TS2-6	6	--	<50	**714**	--	--	--	--
Laboratory Method Reporting Limit		10	50	250	0.02	0.1	0.05	0.15
MTCA-A Cleanup Levels		100	2,000	2,000	0.03	7	6	9

Summary and Conclusions

On January 24, 2017, four near surface soil samples were collected on the Property to assess potential environmental impacts due to the REC identified in ECI's Phase I ESA. Soil sample TS1-6 contained a concentration of ORO above its MTCA Method A Cleanup Level of 2,000 mg/kg. No other COC was detected above its respective laboratory reporting limit in any of the four samples.

Based on these results, it appears that a release has occurred on the Property, likely associated with drips and spills from the ASTs and/or exterior hydraulic hoists. The extent of the release appears to be fairly localized in the top 6-12 inches of soil, and limited to the first 20 feet of the southern drainage trench.

ECI appreciates the opportunity to provide environmental consulting services on this project. Should you have any questions, please contact our office at (253) 238-9270.

Respectfully submitted,
EcoCon, Inc. | Environmental Services

Brian A. Dixon
Vice President/ Sr. Environmental Scientist

Qualifications of This Report

Although this Focused Subsurface Investigation has been a reasonably thorough attempt to investigate the potential presence of contamination, there is always the possibility that additional sources of contamination have escaped detection due to the limitations of this study, the inaccuracy of governmental records, and the presence of undetected and unreported environmental incidents. ECI reserves the right to alter our findings based on our review of any information obtained and reviewed after the date of this report.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar conditions, by reputable environmental consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional information included in this report. Should you have any questions regarding this report, please contact our office at (253) 238-9270.

List of Appendices

Appendix A: Project Figures

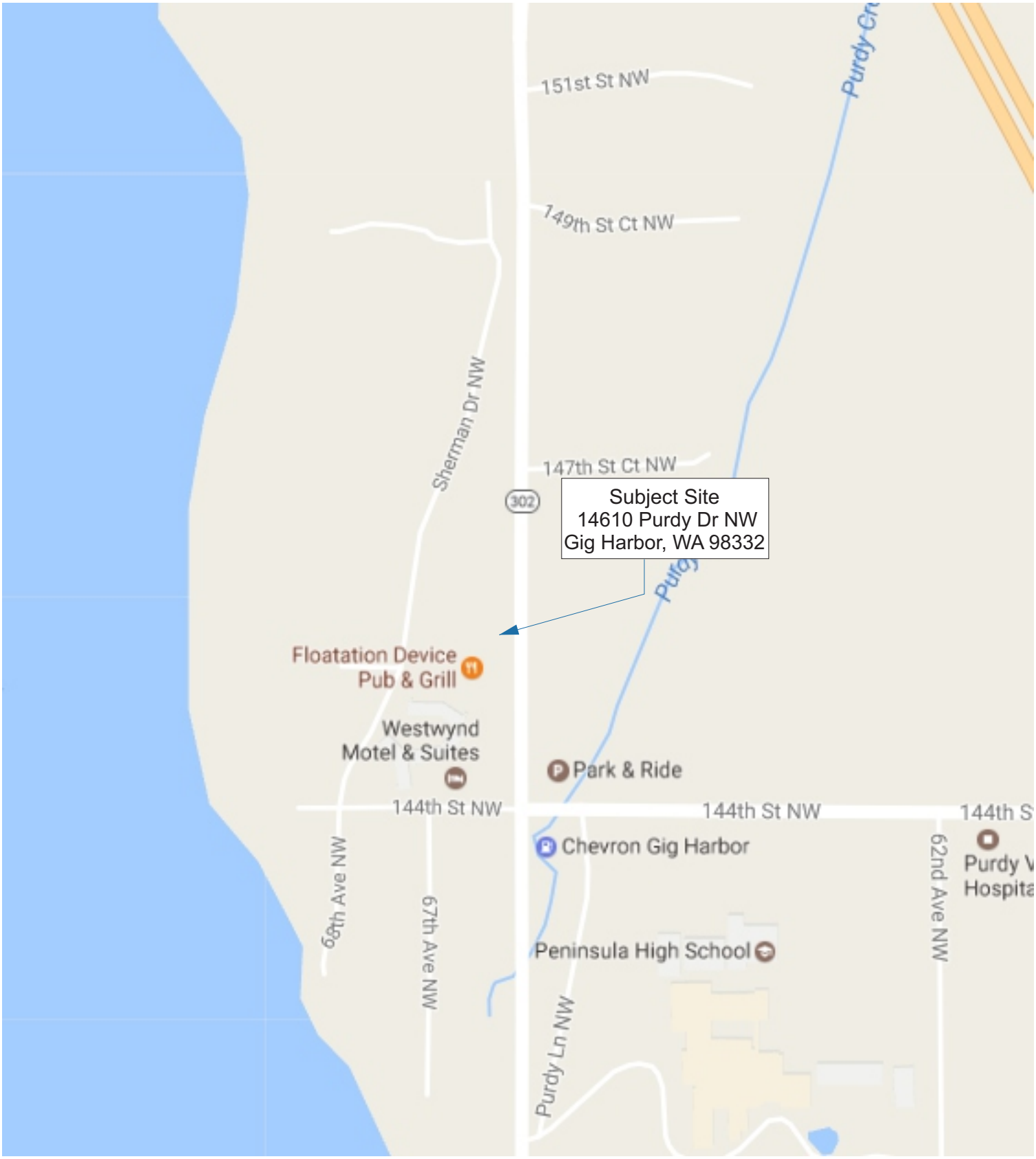
- Figure 1: Property Vicinity Map
- Figure 2: Property Topographic Map
- Figure 3: Historical Soil Sample Location Map
- Figure 4: FSI Soil Sample Location Map

Appendix B: Project Analytical Results

- Laboratory Analytical Report
- Sample Chain of Custody

Appendix A

Project Figures



N
Not To Scale

Property Vicinity Map
Focused Subsurface Investigation
14610 Purdy Dr NW
Gig Harbor, WA 98332

Date:	January 25, 2017
Completed By:	K. Spencer
Reviewed By.:	B. Dixon
Version:	ECI-001
Project No.:	0359-01-02

Figure No.: 01
Sheet 01 of 04

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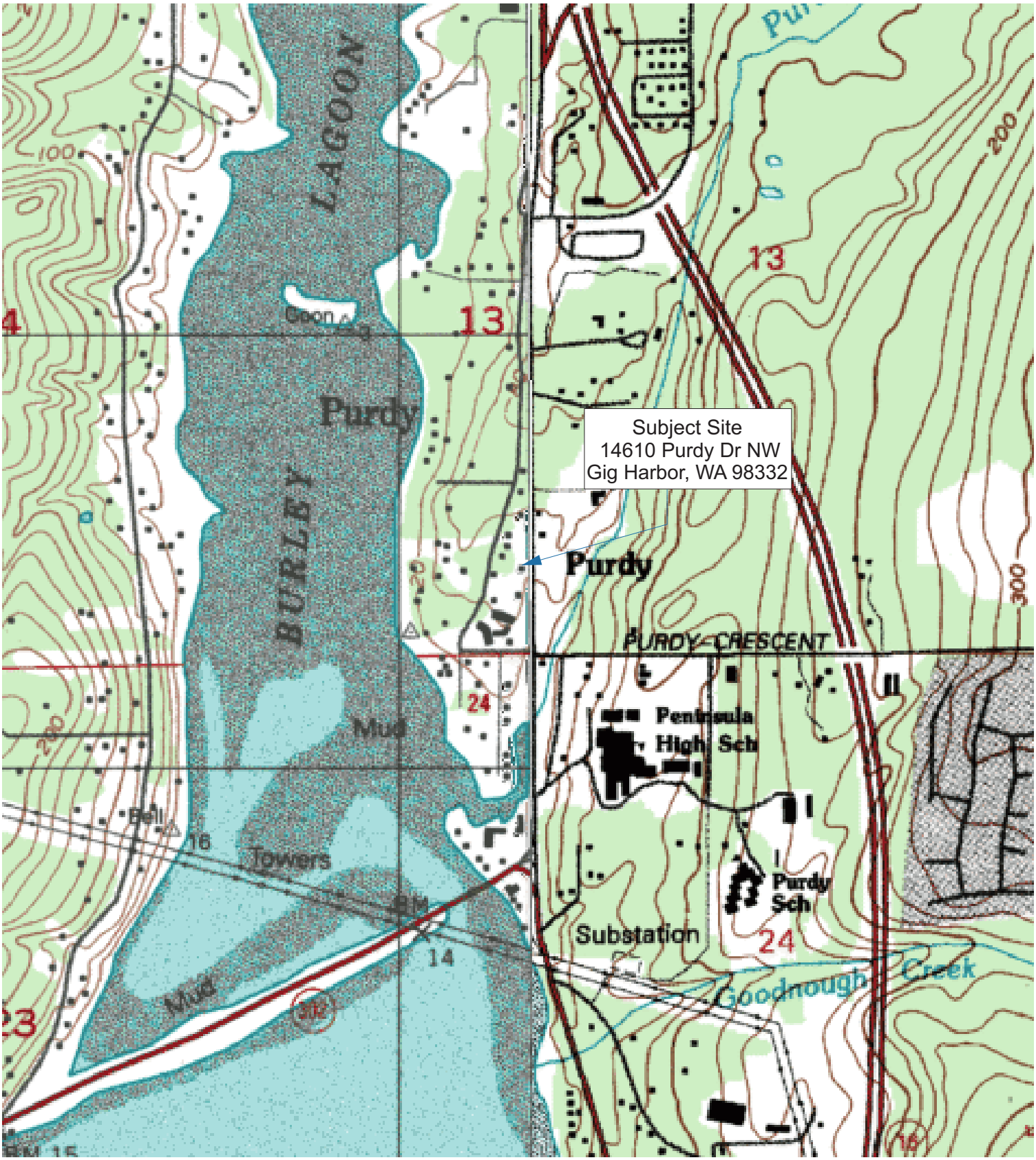
www.ecocononline.com



N
Not To Scale

Property Topographic Map
Focused Subsurface Investigation
14610 Purdy Dr NW
Gig Harbor, WA 98332

Date:	January 25, 2017
Completed By:	K. Spencer
Reviewed By.:	B. Dixon
Version:	ECI-001
Project No.:	0359-01-02

Figure No.: 02
Sheet 02 of 04

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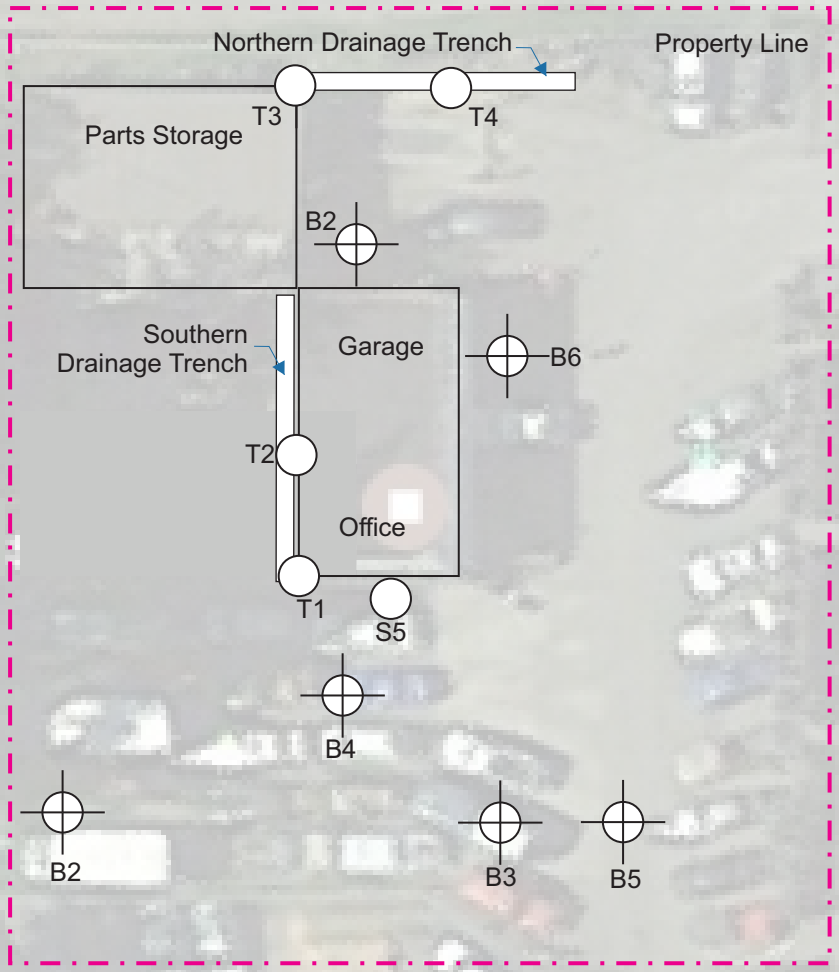

State Hwy 302 Kp N

N

Legend

Trench/Shallow Sample Location

Boring Location, EMS 2010

Historical Soil Sample Location Map

Focused Subsurface Investigation
14610 Purdy Dr NW
Gig Harbor, WA 98332

Date:	January 25, 2017
Completed By:	K. Spencer
Reviewed By.:	B. Dixon
Version:	ECI-001
Project No.:	0359-01-02

03

Sheet 03 of 04

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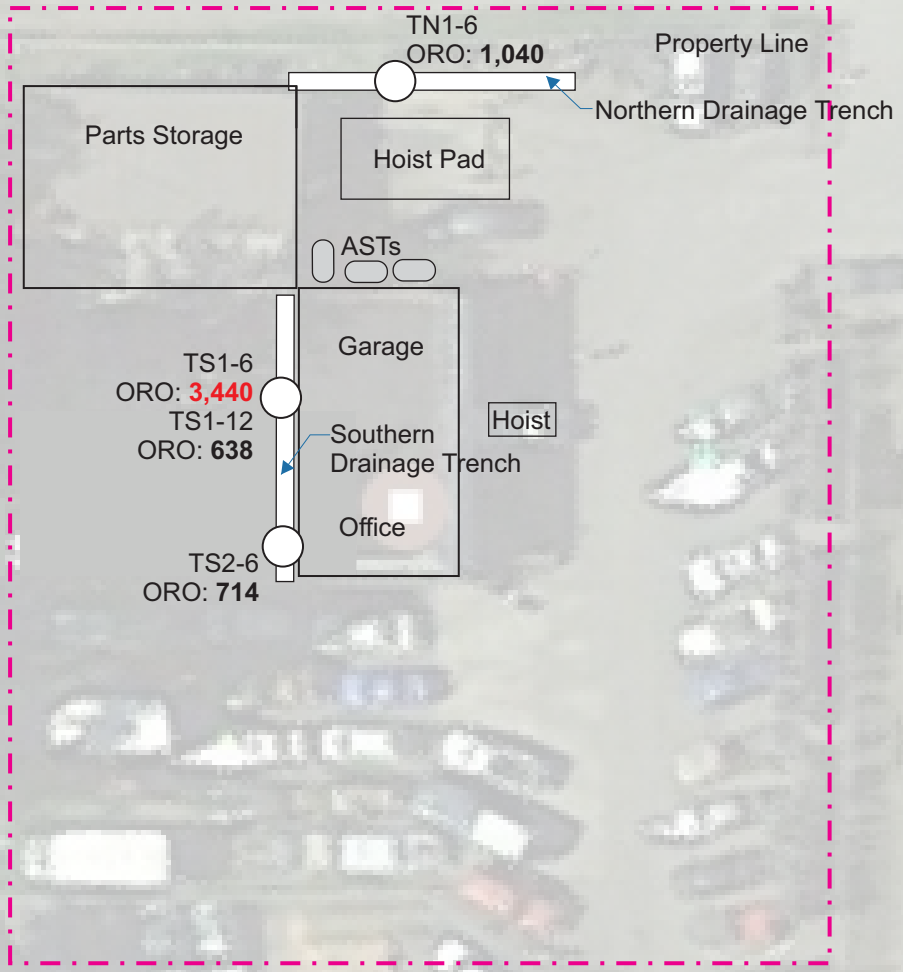

N

Legend

- ○ Trench/Shallow Sample Location, ECI 2016
- ORO Oil-Range Organics
- RED Concentration Exceeds MTCA Method A Cleanup Level

Results Presented in Milligrams per Kilogram

FSI Soil Sample Location Map

Focused Subsurface Investigation
14610 Purdy Dr NW
Gig Harbor, WA 98332

Date:	January 25, 2017
Completed By:	K. Spencer
Reviewed By.:	B. Dixon
Version:	ECI-001
Project No.:	0359-01-02

04

Sheet 04 of 04

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Appendix B

Project Analytical Results

Appendix B
Project Analytical Results

Libby Environmental, Inc.
4139 Libby Road NE • Olympia, WA 98506-2518

January 27, 2017

Brian Dixon
ECI
P.O. Box 153
Fox Island, WA 98333

Dear Mr. Dixon:

Please find enclosed the analytical data report for the Gig Harbor Trans. Project located in Gig Harbor, 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: 1/24/17 Page: 1 of 1

Client: ECI
Project Manager: Brian Dixon
Address: 15 S. Oregon Ave #110
Project Name: Gig Harbor Trans.
City: Tacoma State: WA Zip: 98409
Location: Gig Harbor City, State: Gig Harbor, WA
Phone: 253-380-4303 Fax:
Collector: Kaden Reed Date of Collection: 1/24/17
Client Project # 0359-01-02
Email: BDixon@ecdcom.us

	Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 8021 +Gx	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	TN1-6	6"		S	4 oz jar					X										
2	TS1-6	6"		S	4oz jar			X		X										
3	TS1-12	12"		S	4oz jar					X										Hold
4	TS2-6	6"		S	4oz jar					X										
5																				
6																				
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10																				
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12																				
13																				
14																				
15																				
16																				
17																				

Relinquished by:	Date / Time	Received by:	Date / Time
Kaden Reed	1/24/17 1440	[signature]	1/24/17 2:40pm
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			

Remarks:

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

GIG HARBOR TRANS. PROJECT
ECI
Gig Harbor, Washington
Libby Project # L170124-4
Client Project # 0359-01-02

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260C) 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	1/25/17	nd	nd	nd	nd	nd	106
LCS	1/25/17	81%	82%				96
TS1-6	1/25/17	nd	nd	nd	nd	nd	105
TS1-6 MS	1/25/17	105%	107%				104
TS1-6 MSD	1/25/17	105%	106%				102
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 (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

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

GIG HARBOR TRANS. PROJECT
ECI
Gig Harbor, Washington
Libby Project # L170124-4
Client Project # 0359-01-02

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

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	1/25/17	100	nd	nd
TN1-6	1/25/17	106	nd	1040
TS1-6	1/25/17	123	nd	3440
TS1-6 Dup	1/25/17	111	nd	3680
TS2-6	1/25/17	94	nd	714
Practical Quantitation Limit			50	250

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.
4139 Libby Road NE • Olympia, WA 98506-2518

February 2, 2017

Brian Dixon
ECI
P.O. Box 153
Fox Island, WA 98333

Dear Mr. Dixon:

Please find enclosed the analytical data report for the Gig Harbor Trans Project located in Gig Harbor, 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: 1/24/17 Page: 1 of 1

Client: EC1

Project Manager: Brian Dixon

Address: 15 S. Oregon Ave #110

Project Name: Gig Harbor Trans.

City: Tacoma State: WA Zip: 98409

Location: Gig Harbor City, State: Gig Harbor, WA

Phone: 253-380-4303 Fax:

Collector: Kaden Reed Date of Collection: 1/24/17

Client Project # 0359-01-02

Email: BDixon@ecdcorp.us

	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	TN1-6	6"		S	4 oz jar					X									
2	TS1-6	6"		S	4oz jar		X			X									
3	TS1-12	12"		S	4oz jar					X									~~Hold~~
4	TS2-6	6"		S	4oz jar					X									1-31-17 added DxDx per Brian via email. 48hr
5																			
6																			
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Relinquished by:	Date / Time	Received by:	Date / Time
Kaden Reed	1/24/17 1440	[signature]	1/24/17 2:40pm
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			

Remarks:

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

GIG HARBOR TRANS PROJECT
ECI
Gig Harbor, Washington
Libby Project # L170124-4B
Client Project # 0359-01-02

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

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	1/31/17	116	nd	nd
TS1-12	1/31/17	99	nd	638
Practical Quantitation Limit			50	250

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke