

September 14, 2018

Gig Harbor Transmission
 14610 Purdy Drive Northwest
 Gig Harbor, Washington 98332

Attention: Tracey Larson

Re: Groundwater Monitoring Report - Revised
 Third Quarter 2018 – Third Consecutive Sampling Event
 VCP Number: SW1590 / Facility Site ID: 11876 / Cleanup Site ID: 1952

INTRODUCTION

ECI completed the third quarter 2018 groundwater monitoring sampling event for the above referenced facility on August 7, 2018. Figures 1, 2, and 3 in Appendix A present the location of the Site and the location of the monitoring well at the Site. The following is a summary of the groundwater sampling activities and analytical findings.

Contaminants of Concern (COCs) and Cleanup Levels

Based upon the results of previous investigations, the COCs and respective cleanup levels for the Site are presented below:

Project Contaminants of Concern

Contaminant of Concern (COCs)	Groundwater Cleanup Levels (µg/L) MTCA Method A Groundwater Cleanup Levels
Diesel Range Organics (DRO)	500
Oil Range Organics (ORO)	500
Total and Dissolved Lead	15
Total and Dissolved Chromium	50

Groundwater Sampling Activities

Groundwater sampling was attempted on August 7, 2018. However, no groundwater was detected within the installed groundwater monitoring well, MW1, therefore, groundwater was unable to be sampled, at this time. Previous sampling events have not detected any petroleum hydrocarbon constituents or metals above the MTCA Method A cleanup levels. Table 2 in Appendix C presents a summary of the groundwater sampling results for the Site.

Conclusion

On August 7, 2018, a confirmation/compliance groundwater sample was attempted to be collected from the groundwater monitoring well installed at the Site (MW1). However, no groundwater was detectable within MW1. The lack of detectable groundwater this quarter implies that the shallow groundwater levels in the vicinity of MW1 are likely perched and are only seasonally present.

Ecology has requested groundwater sampling for one additional consecutive quarter. Although ECI does not consider the continued sampling necessary, ECI will continue to collect samples on a 90-day interval until Ecology has determined that the sampling results are representative of the groundwater condition underlying the Site and are in compliance with the substantive requirements outlined in WAC 173-340.

Qualifications


Our professional services have been performed using the degree of care and skill ordinarily exercised, under similar conditions, by environmental professionals performing this or similar services. No other warranty, expressed or implied, is made as to the professional information included in this report.

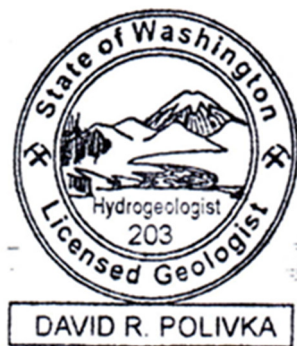
ECI appreciates the opportunity to provide environmental consulting services on this project. Should you have any questions, please contact our office at (253) 238-9270.

Respectively Submitted:

ECI | Environmental Services


Kaden Reed
Sr. Environmental Technician


David Polivka, L.G.
Senior Environmental Geologist



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Appendix A: Project Figures

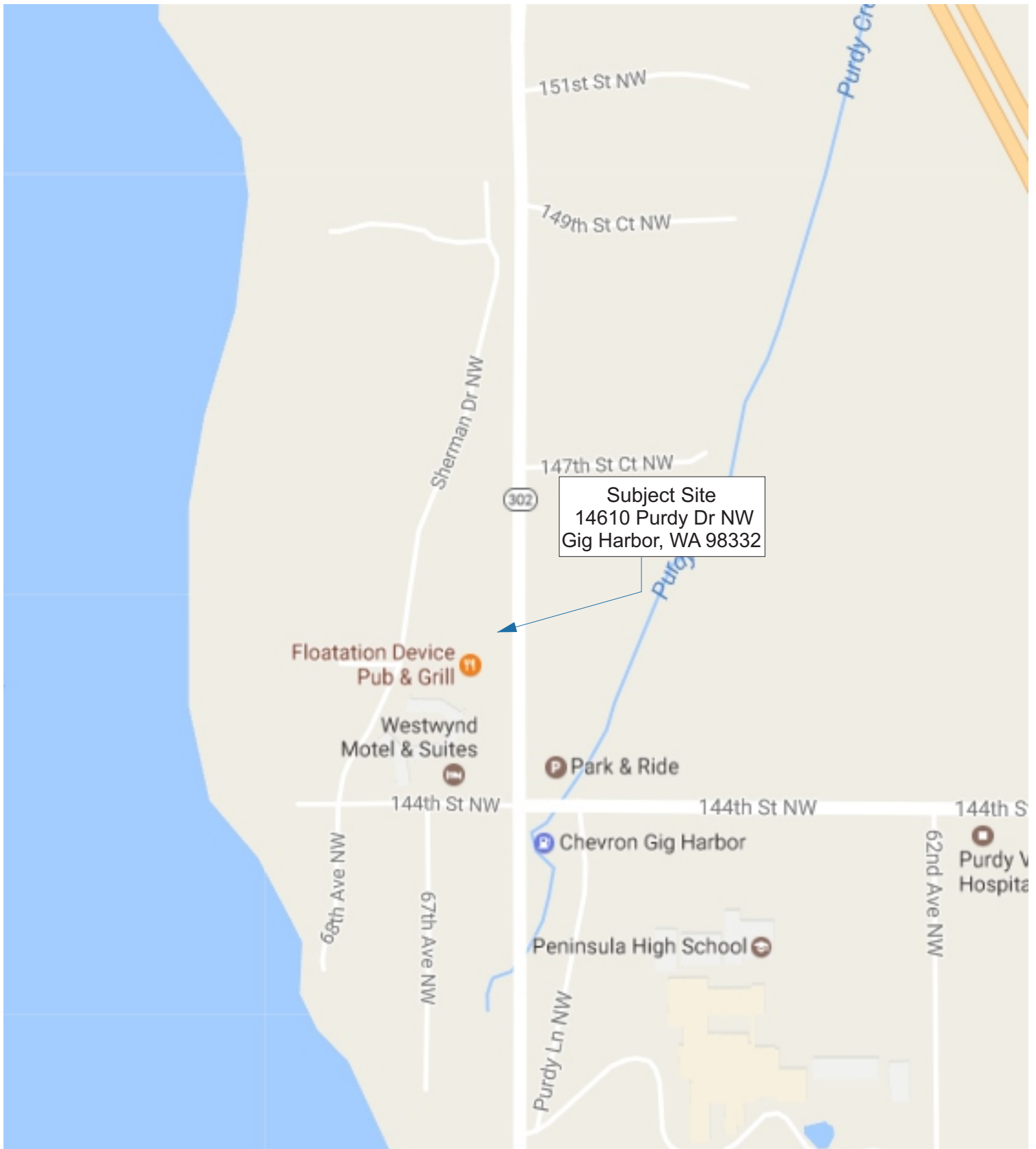
Figure 1: Site Location Map

Figure 2: Site Topographic Map

Figure 3 : Groundwater Sample Location Map

Appendix A

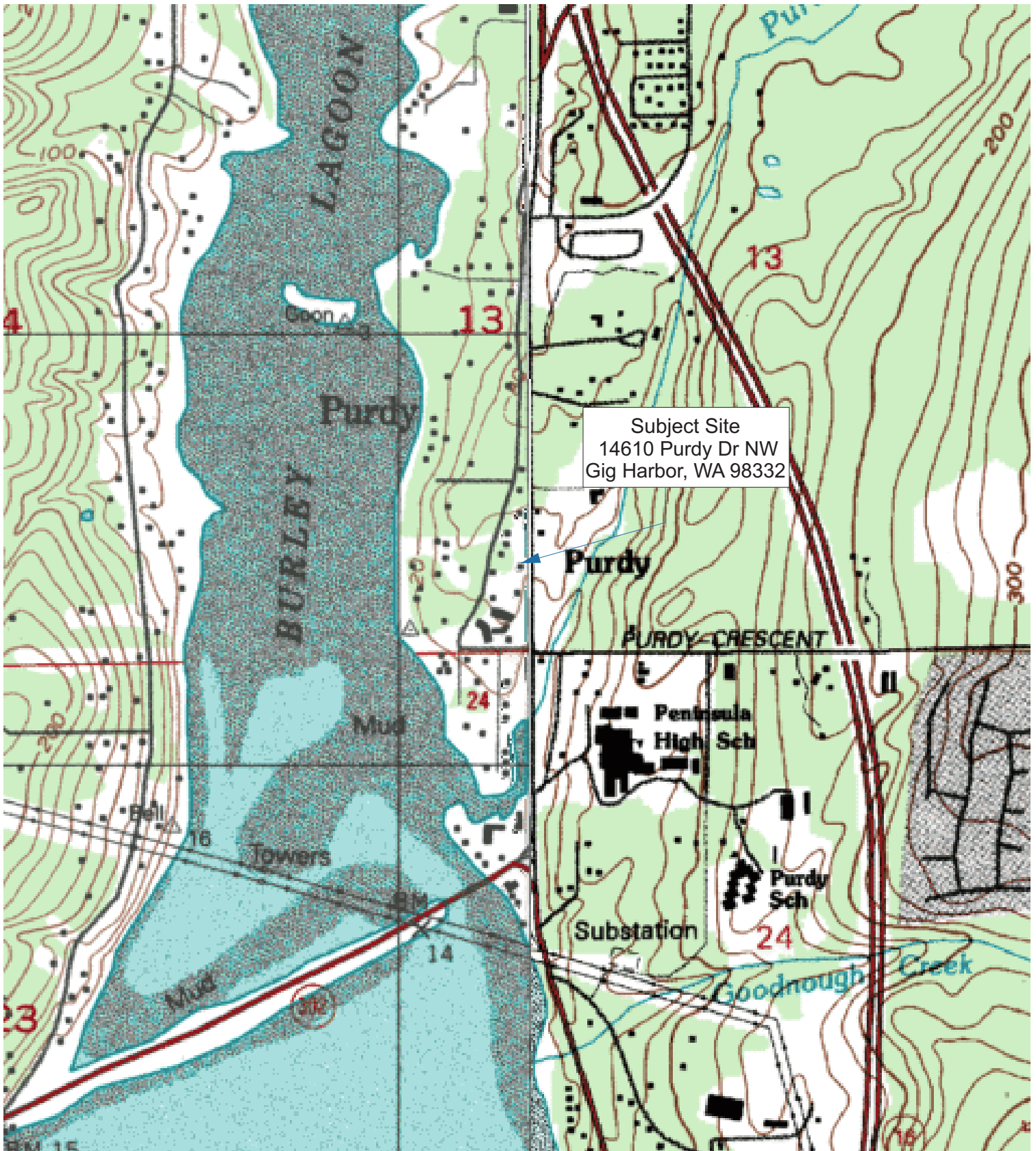
Project Figures



Site Location Map
 Quarterly Groundwater Sampling
 14610 Purdy Dr NW
 Gig Harbor, WA 98332

Date: September 12, 2018
 Completed By: K. Spencer
 Reviewed By.: S. Spencer
 Version: ECI-001
 Project No.: 0359-01-04

Figure No.:
01
 Sheet 01 of 03



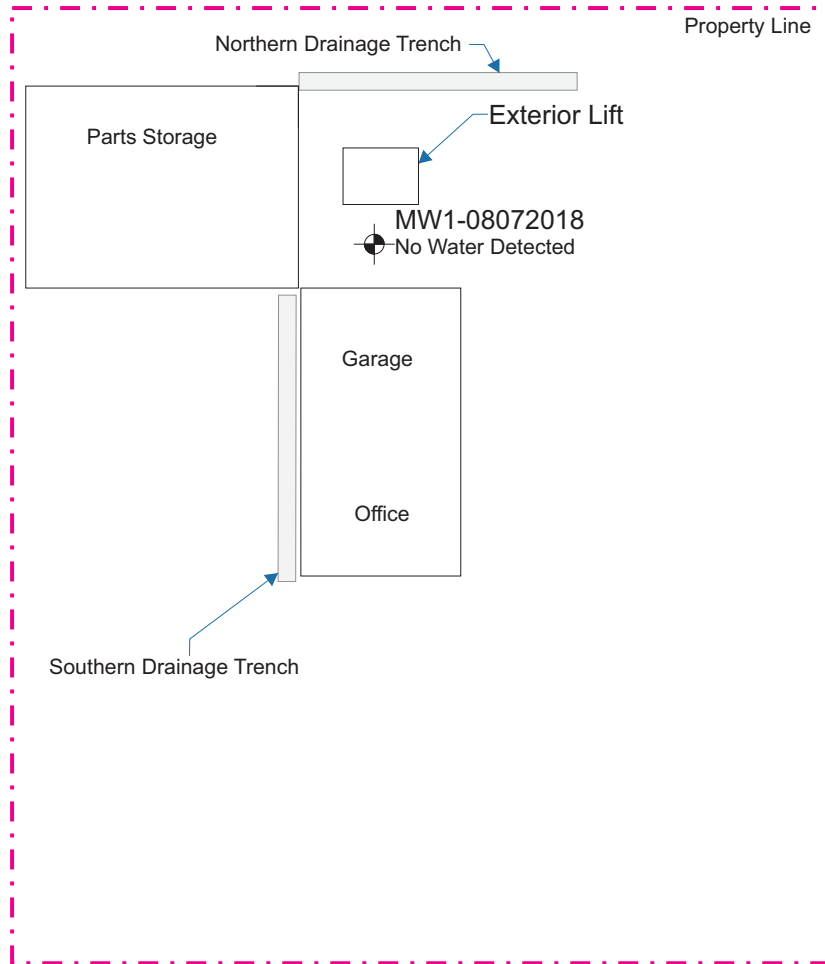
Subject Site
 14610 Purdy Dr NW
 Gig Harbor, WA 98332



Site Topographic Map
 Quarterly Groundwater Sampling
 14610 Purdy Dr NW
 Gig Harbor, WA 98332


Date: September 12, 2018
 Completed By: K. Spencer
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Figure No.:
02
 Sheet 02 of 03



State Hwy 302 Kp N

Explanation

 Monitoring Well Location



Groundwater Sample Location Map
 Quarterly Groundwater Sampling
 14610 Purdy Dr NW
 Gig Harbor, WA 98332

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Appendix B: Project Documents

Groundwater Sampling Documentation

Appendix B

Project Documents

ECI MONITORING WELL PURGE AND SAMPLE FORM						Date: 8/7/2018
Project Name: Gig Harbor Transmission		Project No.: 0359-01-05		Well No.: MW1		
Field Personnel: KJR			Static Water Level: N/A			
Water Level Measurement Method: E-Tape						
Time Start Purge: N/A		Time End Purge: N/A		Time Sampled: N/A		
Measuring Point Description: TOC						
Purge Method: N/A				Purge Depth: N/A		
Well Volume Calculation (Fill in before purging)	Total Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier for Casing Diameter (in) (Circle) $V = (d^2h/77.01)$		Casing Volume (gal)
	13.3	N/A				
Time						
Volume Purged (mL)						
pH (0.1)						
Temperature C. (3%)						
Conductivity uS/cm (3%)						
Turbidity (10%)						
Dissolved Oxygen						
ORP						
Color						
Odor/Sheen						
Comments: Groundwater was not detected within the Monitoring Well Casing.						
Percent Recovery:			Depth to Water at Sampling (ft): N/A			
Sampling Equipment: N/A						
Sample No.	No. of Containers	Container Type	Preservative	Field Filtration	Analysis Request (Method)	Comments
Total Discharge (gal): N/A		Disposal Method: N/A		Drum Designation(s)/Volume:		
WELL HEAD CONDITIONS CHECKLIST (Circle YES or NO - if NO, add comments)						
Well Security Devices OK (Bollards, Christy Lid, Casing Lid and Lock): YES / NO						
Inside of Well Head and Outer Casing Dry: YES / NO						
Well Casing: YES / NO						
Notes:						

Appendix C: Project Tables

Table 1: Summary of Soil Analytical Results

Table 2: Summary of Compliance Groundwater Analytical Results

Appendix C Project Tables

Table 1: Summary of Soil Analytical Results
Gig Harbor Transmission
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Sample ID	Sample Date	Sample Depth (Feet)	Total Petroleum Hydrocarbons (mg/kg)			Volatile Organic Compounds (mg/kg)				Carcinogenic PAHs (mg/kg)							Metals (mg/kg)								
			Gasoline-Range	Diesel-Range	Oil-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenzo(a,h)anthracene	Total cPAHs*	Arsenic	Barium	Cadmium	Total Chromium	Lead	Mercury	Selenium	Silver
TPCHD 2009 - Site Inspection																									
S1-surface-031209	3/12/2009	Surface	<25	<31	180	<0.0012	<0.0062	<0.0012	<0.0037	<0.0083	<0.0083	<0.0083	<0.0083	<0.0083	<0.0083	<0.0083	ND	<13	100	<0.63	57	120	<0.31	<13	<0.63
S2-surface-031209	3/12/2009	Surface	<270	<4,200	29,000	<0.0013	<0.0065	<0.0013	<0.0026	0.094	0.21	0.33	<0.090	0.13	0.11	<0.090	0.20	<14	130	8.8	30	400	0.53	<14	<0.68
EMS 2010 - Phase II Subsurface Investigation																									
B1-10-021010	2/10/2010	10	<5	<20	<50	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B2-8-021010	2/10/2010	8	--	<20	<50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B3-10-021010	2/10/2010	10	<5	<20	<50	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B4-11-021010	2/10/2010	11	<5	<20	<50	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B5-14-021010	2/10/2010	14	<5	<20	<50	<0.02	<0.05	<0.05	<0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B6-8-021010	2/10/2010	8	--	<20	<50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SS1	2/10/2010	0.5-1	--	<20	<50	--	--	--	--	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--	--	--	0.6	3.4	17	--	--	--
T1	2/10/2010	0.5-1	--	--	--	--	--	--	--	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--	--	--	0.5	8.4	35	--	--	--
T2	2/10/2010	0.5-1	--	--	--	--	--	--	--	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--	--	--	0.3	13	20	--	--	--
T3	2/10/2010	0.5-1	--	--	--	--	--	--	--	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--	--	--	0.4	35	53	--	--	--
T4	2/10/2010	0.5-1	--	--	--	--	--	--	--	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	--	--	--	1.2	33	30	--	--	--
ECI 2017 - Focused Subsurface Investigation																									
TN1-6	1/24/2017	0.5	--	<50	1,040	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TS1-6	1/24/2017	0.5	<10	<50	3,440	<0.02	<0.1	<0.05	<0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TS1-12	1/24/2017	1	--	<50	638	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TS2-6	1/24/2017	0.5	--	<50	714	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TS1-6B	1/24/2017	0.5	--	<50	5,660	--	--	--	--	<0.0703	0.156	0.174	<0.0703	0.0868	<0.0703	<0.0703	0.13	--	--	--	--	660	--	--	--
ECI 2017 - Confirmation Soil Sampling																									
EX1-18	4/4/2017	1.5	--	<50	1,170	--	--	--	--	<0.0451	<0.0451	<0.0451	<0.0451	<0.0451	<0.0451	<0.0451	ND	--	--	--	--	100	--	--	--
EX2-18	4/4/2017	1.5	--	<50	<250	--	--	--	--	<0.0466	<0.0466	<0.0466	<0.0466	<0.0466	<0.0466	<0.0466	ND	--	--	--	--	55	--	--	--
MTCA Method A Cleanup Levels			100	2,000	2,000	0.03	7	6	9	NA	NA	NA	NA	0.1	NA	NA	0.1	20	NA	2	2,000	250	2	NA	NA

ND: Not detected above laboratory reporting limit

*: Total Concentration using the toxicity equivalency methodology in WAC 173-340-708 (8)

Bold: Contaminant Detected Above Laboratory Reporting Limit

Red: Contaminant Concentration Exceeds MTCA Method A Cleanup Level

--: Not Analyzed



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**Table 2: Summary of Groundwater Analytical Results
Gig Harbor Transmission
14610 Purdy Drive Northwest
Gig Harbor, Washington 98332**

Sample ID	Sample Date	Total Petroleum Hydrocarbons (µg/L)			Volatile Organic Compounds (µg/L)				Carcinogenic PAHs (µg/L)							Metals (µg/L)							
		Gasoline-Range	Diesel-Range	Oil-Range	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Total cPAHs ¹	Hexavalent Chromium	Dissolved Cadmium	Total Cadmium	Dissolved Chromium	Total Chromium	Dissolved Lead	Total Lead
ECI 2017 - Focused Subsurface Investigation																							
B1H2O	2/10/2010	<50	<100	<200	<1	<1	<1	<2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B2H2O	2/10/2010	<50	<100	<200	<1	<1	<1	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND	--	--	<0.4	--	50	35²	
B6H2O	2/10/2010	<50	<100	<200	<1	<1	<1	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	ND	--	--	--	--	--	--	--	
ECI 2018 - Groundwater Monitoring																							
MW1	2/5/2018	--	<200	<400	--	--	--	--	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998	ND	<0.01	<0.5	<0.5	<5	<5	<5	
MW1	5/8/2018	--	<200	<400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW1	6/19/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<5	<5	<5	
MW1	8/7/2018*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MTCA Method A Cleanup Levels		800	500	500	5	1,000	700	1,000	NA	NA	NA	NA	0.1	NA	NA	0.1	50	5	5	50	50	15	15

ND: Not detected above laboratory reporting limit

¹: Total Concentration using the toxicity equivalency methodology in WAC 173-340-708 (8)

²: Concentration is considered anomalous. Reconnaissance groundwater samples tend to bias metal concentrations high due to presence of suspended solids.

--: Not Analyzed

*: No groundwater was detected when the groundwater monitoring well was accessed