GROUNDWATER MONITORING REPORT: Second Quarter

Performed at:
Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington 98422

AEROTECH
Environmental Consulting Inc.

July 13, 2018

Anchorage Seattle Portland

Cost-effective environmental solutions
for the western United States and Alaska

www.AerotechEnvironmental.com

AEROTECH
Environmental Consulting Inc.

13925 Interurban Avenue South, Suite 210
Seattle, Washington 98168
(360) 710-5899

512 W. International Airport Road, Suite 201
Anchorage, Alaska 99518
(907) 575-6661

July 26, 2018

Mr. Carl Swindahl
Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington 98422

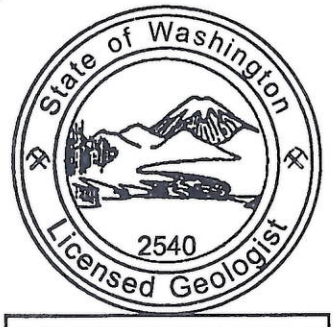
RE: Groundwater Monitoring Report – Second Quarter
Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington 98422

Dear Mr. Swindahl,

As you are aware, Aerotech Environmental Consulting, Inc. ("Aerotech") has been retained to collect quarterly groundwater samples from four groundwater monitoring wells previously installed at Swindahl Properties LLC in Tacoma, Washington. Aerotech conducted groundwater monitoring and sampling activities on July 13, 2018. Enclosed, please find the associated tabulated analytical results, site figures, laboratory analytical report, field data and standard operating procedure document.

Total and Dissolved Arsenic and Lead were not detected above the MTCA Method A Cleanup Levels in any of the four samples collected from groundwater monitoring wells MW1, MW2, MW3 and MW4. The sample collected from groundwater monitoring well MW4 was additionally analyzed for Total Petroleum Hydrocarbons as Diesel ("TPHd"), Total Petroleum Hydrocarbons as Motor Oil ("TPHo"), Benzene, Toluene, Ethylbenzene, Xylenes, and Carcinogenic Polycyclic Aromatic Hydrocarbons ("cPAHs"). None were detected above the MTCA Method A Cleanup Levels or the Laboratory Minimum Reporting Limits. Aerotech recommends the continuation of quarterly groundwater monitoring and sampling.

Please feel free to contact the Aerotech Geologist, Mr. Justin Foslien, or the Aerotech Field Sampling Coordinator, Mr. Nicholas Gerkin at (206) 482-2287 if you have any questions regarding work completed at this Site.



JUSTIN FRANCIS FOSLIEN

Sincerely,

Justin F. Foslien
State of Washington
Licensed Geologist No. 2540

Nick Gerkin
Vice President
Principal Environmental Scientist

APPENDIX

- Tables & Figures
- Project Contract Documents
- Laboratory Analytical Report and Chain of Custody
- Standard Operating Procedure
- Field Documentation

- Tables & Figures

GROUNDWATER ANALYTICAL RESULTS

Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington 98422

MW1

Well Depth	Sampling Date	Ground Water Level	Elevation (TOC north)*	Water Level Elevation	TPHd	TPHo	Benzene	Toluene	Ethylbenzene	Xylenes	cPAHs	Dissolved Arsenic	Total Arsenic	Dissolved Lead	Total Lead
Feet		Feet Below TOC	Feet Above MSL	Feet Above MSL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
18.5	04/11/18	2.41	11.75	9.34	--	--	--	--	--	--	--	<2.0	3.0	<2.0	<2.0
	07/13/18	5.01	11.75	6.74	--	--	--	--	--	--	--	<2.0	3.0	<2.0	<2.0
		MTCA Method A Cleanup Levels			500	500	5	1,000	700	1,000	0.1*	5	5	15	15

MW2

Well Depth	Sampling Date	Ground Water Level	Elevation (TOC north)*	Water Level Elevation	TPHd	TPHo	Benzene	Toluene	Ethylbenzene	Xylenes	cPAHs	Dissolved Arsenic	Total Arsenic	Dissolved Lead	Total Lead
Feet		Feet Below TOC	Feet Above MSL	Feet Above MSL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
18.9	04/11/18	8.70	10.27	1.57	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
	07/13/18	9.35	10.27	0.92	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
		MTCA Method A Cleanup Levels			500	500	5	1,000	700	1,000	0.1*	5	5	15	15

MW3

Well Depth	Sampling Date	Ground Water Level	Elevation (TOC north)*	Water Level Elevation	TPHd	TPHo	Benzene	Toluene	Ethylbenzene	Xylenes	cPAHs	Dissolved Arsenic	Total Arsenic	Dissolved Lead	Total Lead
Feet		Feet Below TOC	Feet Above MSL	Feet Above MSL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
19.3	04/11/18	9.00	10.72	1.72	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
	07/13/18	8.95	10.72	1.77	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
		MTCA Method A Cleanup Levels			500	500	5	1,000	700	1,000	0.1*	5	5	15	15

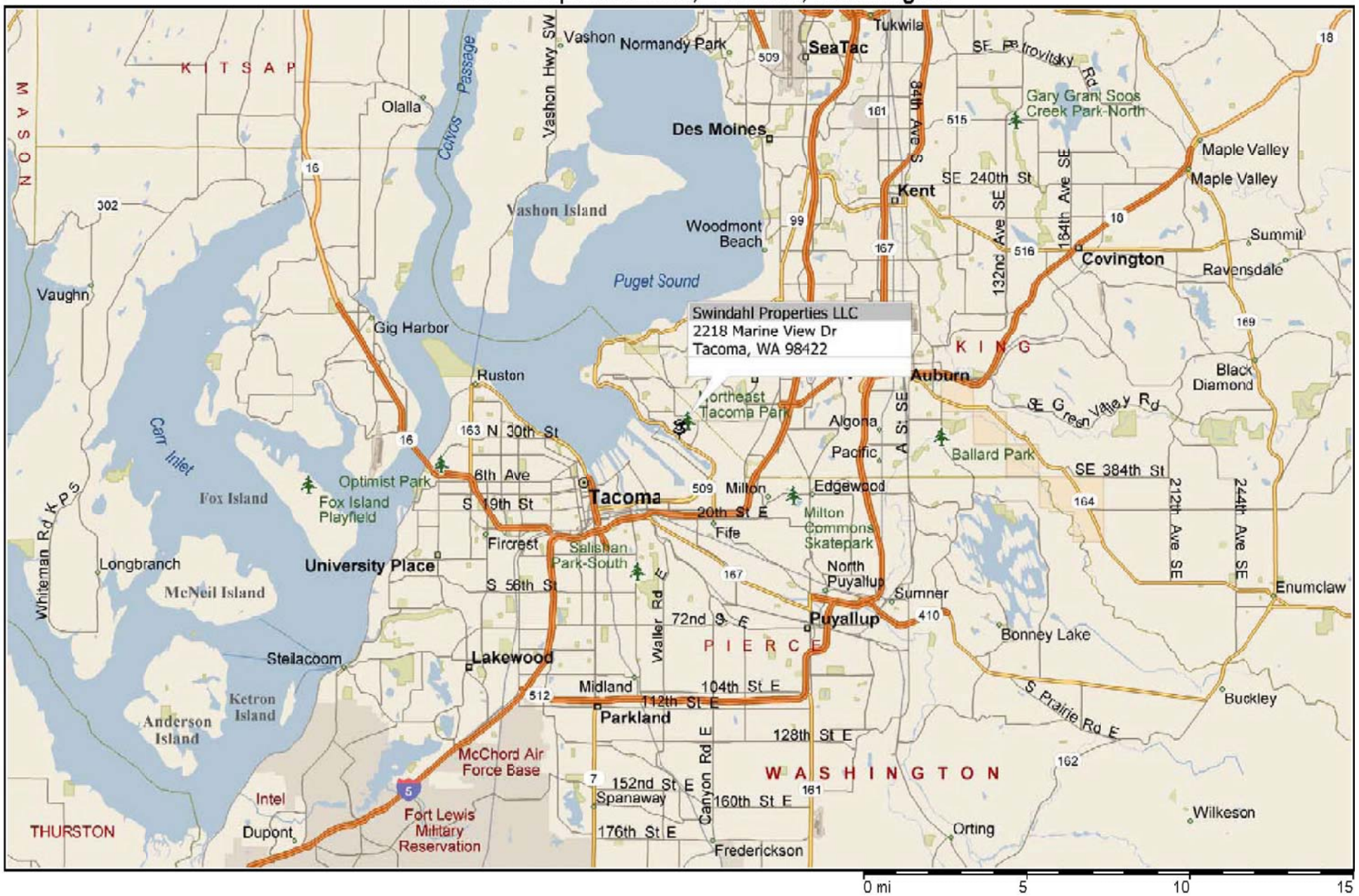
MW4

Well Depth	Sampling Date	Ground Water Level	Elevation (TOC north)*	Water Level Elevation	TPHd	TPHo	Benzene	Toluene	Ethylbenzene	Xylenes	cPAHs	Dissolved Arsenic	Total Arsenic	Dissolved Lead	Total Lead
Feet		Feet Below TOC	Feet Above MSL	Feet Above MSL	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
19.6	04/11/18	6.90	11.02	4.12	--	--	--	--	--	--	--	<2.0	<2.0	<2.0	<2.0
	04/11/18	7.10	11.02	3.92	<200	<500	<1.0	<1.0	<1.0	<1.0	<0.1	<2.0	<2.0	<2.0	<2.0
		MTCA Method A Cleanup Levels			500	500	5	1,000	700	1,000	0.1*	5	5	15	15

EXPLANATION

MTCA = Model Toxic Control Act Cleanup Level (WAC173-340-900)
TOC = Top of Casing MSL = Mean Sea Level
< = not detected at indicated Laboratory Detection Limits -- not analyzed NM = Not Measured
TPHd - Total Petroleum Hydrocarbons as Diesel and TPHo - Total Petroleum Hydrocarbons as Oil by NWTPH-Dx extended
Benzene, Toluene, Ethylbenzene and Xylenes by EPA Method 8021B
* = Effective concentration using Toxic Equivalency Factor per WAC 173-340-708{e}: SUM(Benzo(a)pyrene (x1), Benzo(a)anthracine (x0.1), Benzo(b)fluoranthene (x0.1), Benzo(k)fluoranthene (x0.1), Chrysene (x0.01), Dibenz(a,h)anthracene (x0.1), Indeno(1,2,3-cd)pyrene (x0.1)
cPAHs by EPA Method 8270 SIM Arsenic and Lead by EPA Method 7010
Bolded numbers and red-shaded cells denote concentrations above the MTCA Method A Cleanup Levels for groundwater

Swindahl Properties LLC, Tacoma, Washington

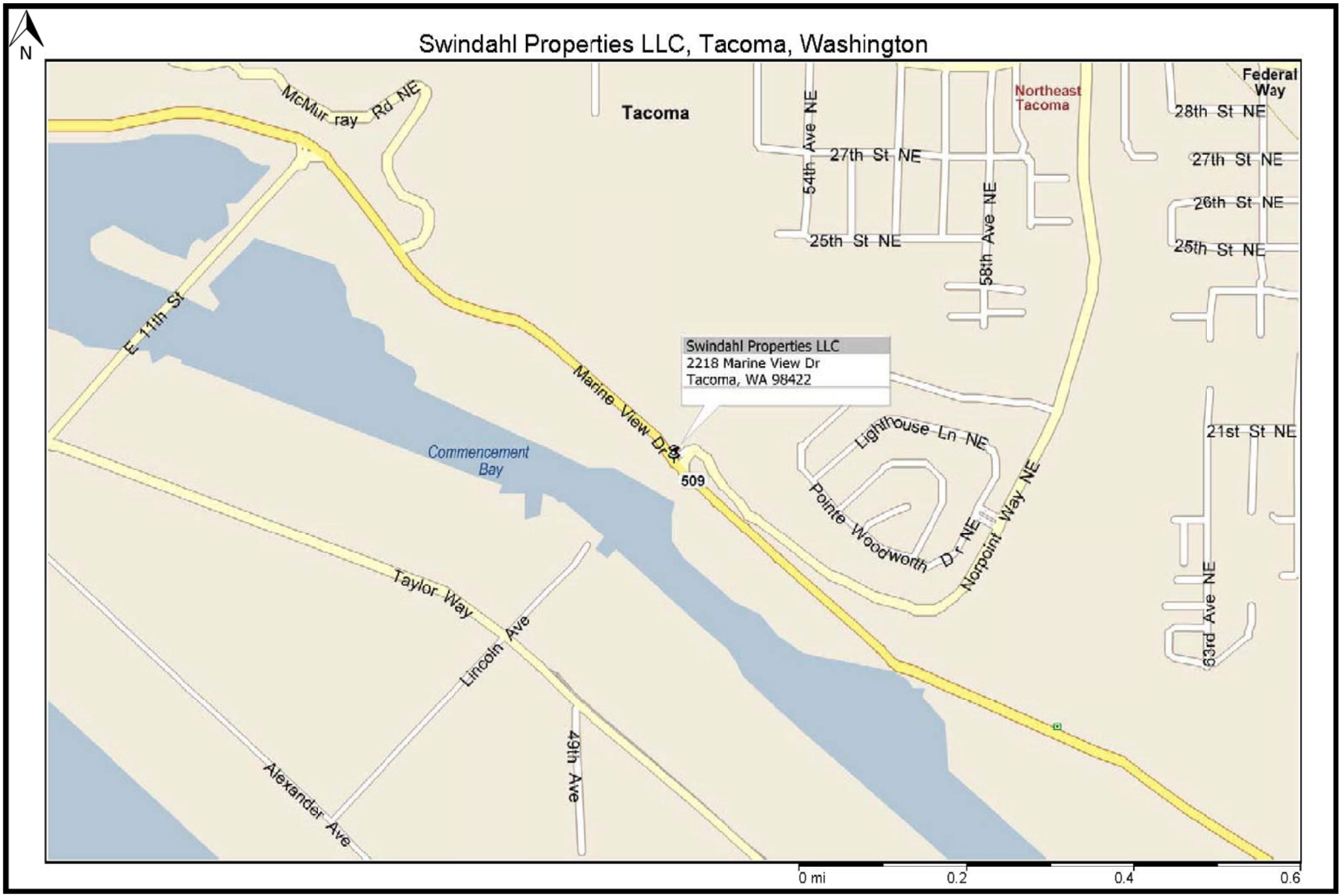


AEROTECH ENVIRONMENTAL CONSULTING	**REGIONAL MAP**	**Swindahl Properties LLC** **2218 Marine View Drive** **Tacoma, Washington**

Date: 04/19/18

By: Nick Gerkin

Figure: 1

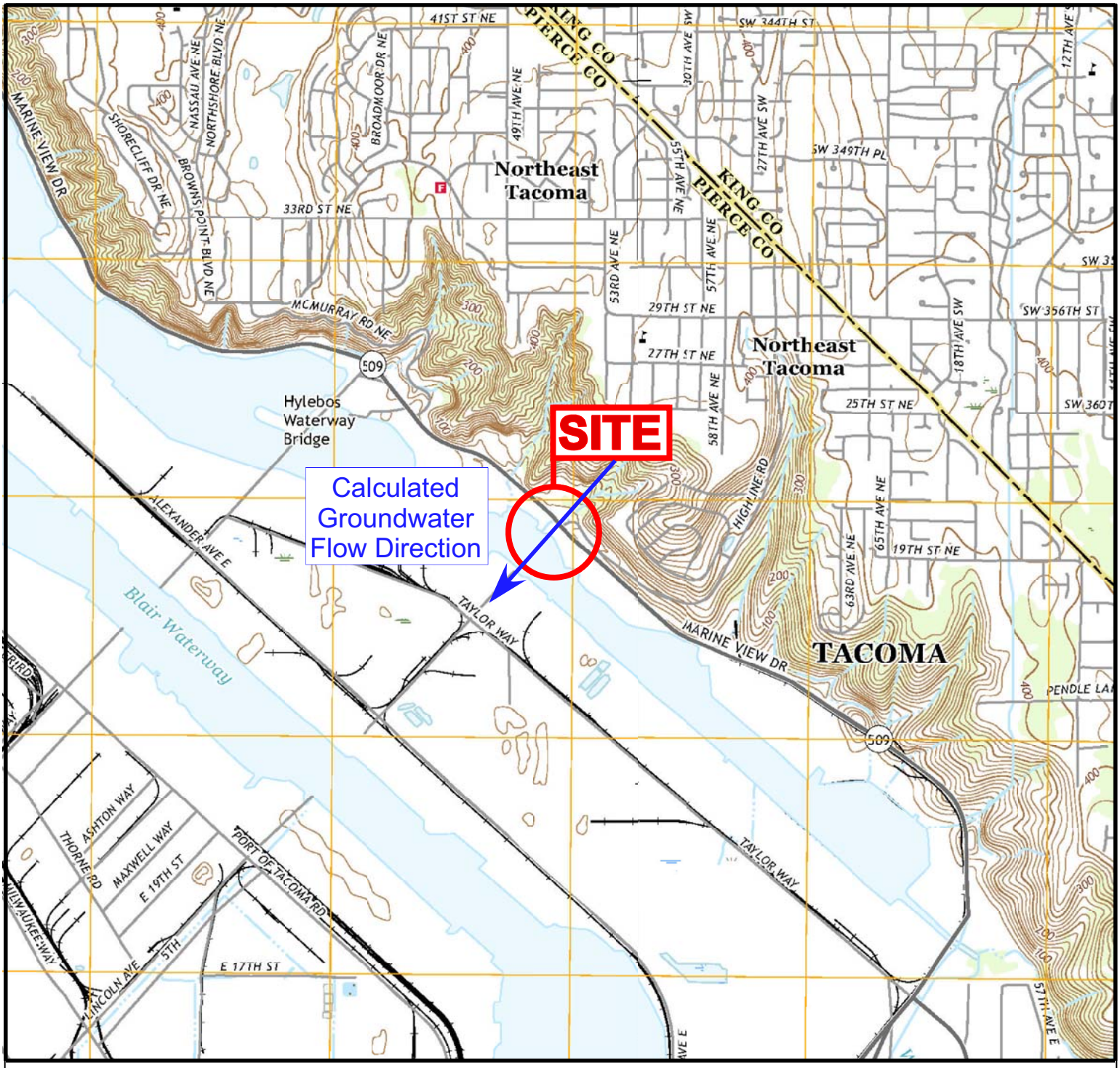


AEROTECH ENVIRONMENTAL CONSULTING

NEIGHBORHOOD MAP

Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington

Date: 04/19/18
By: Nick Gerkin
Figure: 2

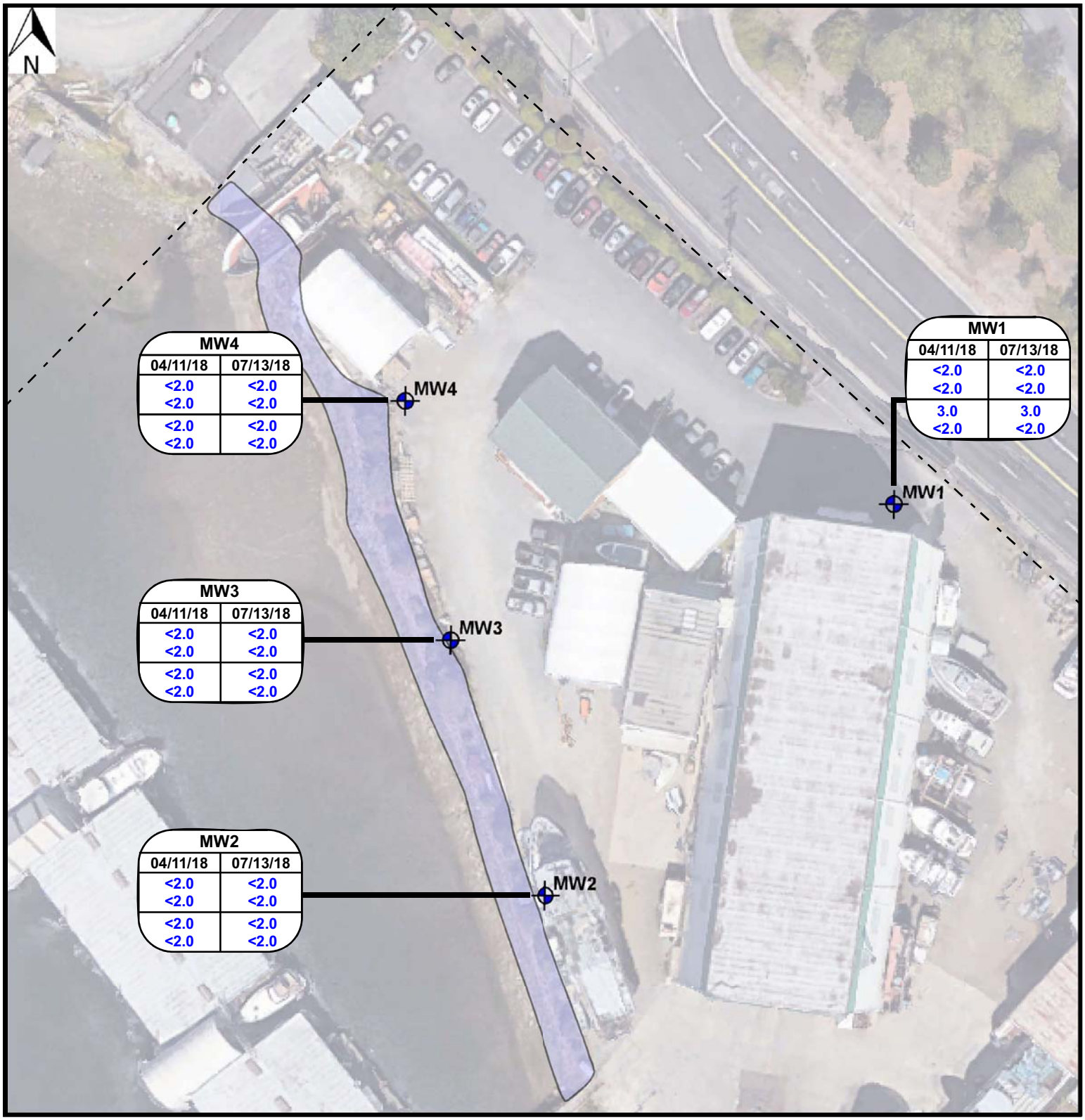


AEROTECH ENVIRONMENTAL CONSULTING

USGS TOPOGRAPHIC MAP

Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington

Date: 08/22/18
By: Nick Gerkin
Figure: 3



EXPLANATION

0 25 50 100
SCALE (feet)

MW4 Groundwater Monitoring Well

Concrete Shoreline Fill

Property Line

MW4 — Well ID
07/13/18 — Date
<2.0 — Total Lead
<2.0 — Dissolved Lead
3.0 — Total Arsenic
<2.0 — Dissolved Arsenic

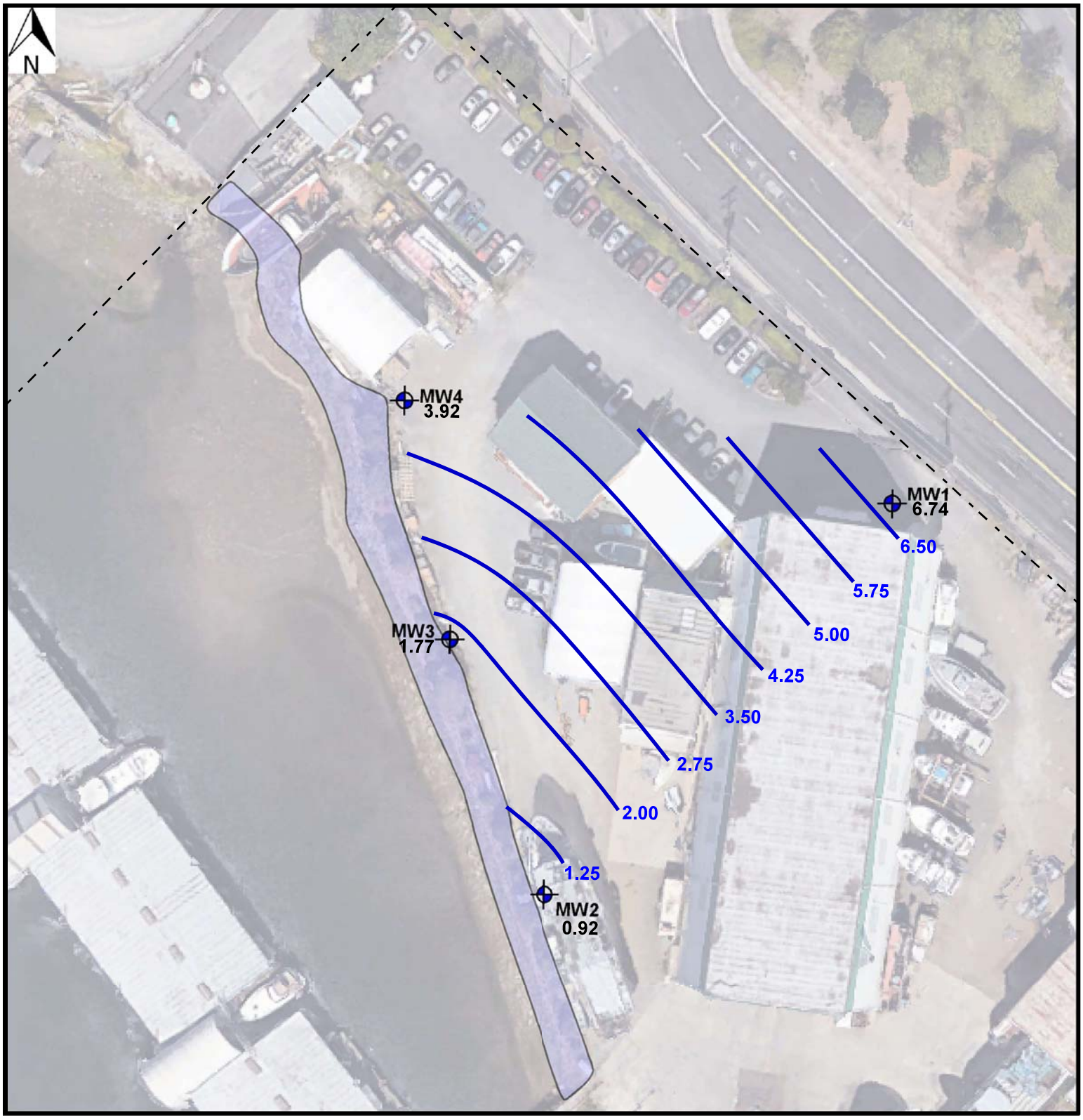
All Concentrations are reported in µg/kg

AEROTECH ENVIRONMENTAL CONSULTING

GROUNDWATER ANALYTICAL RESULTS 07/13/18

Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington

Date: 08/22/18
By: Nick Gerkin
Figure: 4



EXPLANATION

MW4
3.92
Groundwater Monitoring Well
Groundwater Elevation (Feet Above MSL)
Water Elevation Countour
Concrete Shoreline Fill
Property Line

0 25 50 100
SCALE (feet)

Calculated Groundwater Flow Direction and Gradient:

0.026 ft/ft

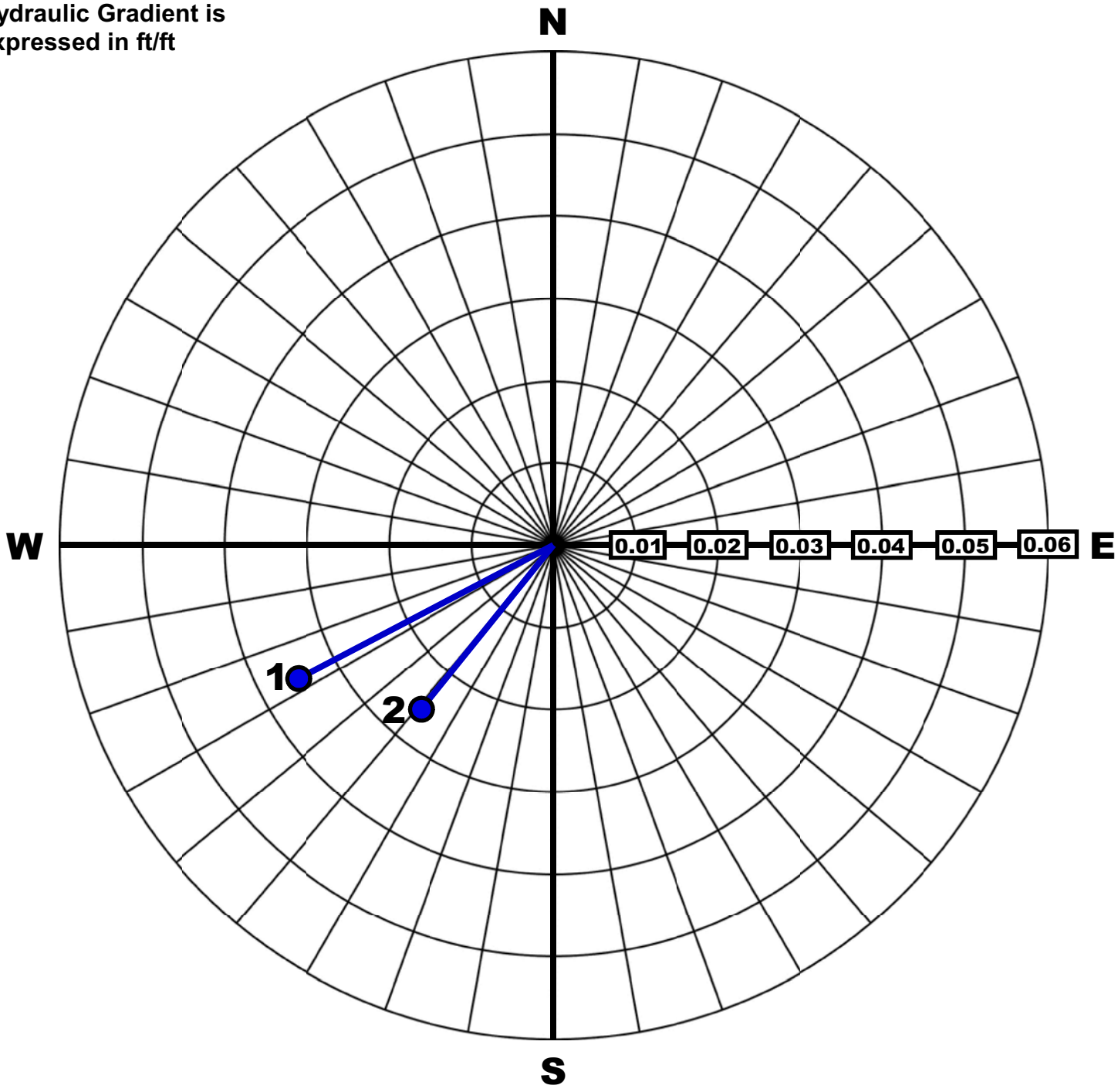
AEROTECH
ENVIRONMENTAL CONSULTING

POTENTIOMETRIC SURFACE MAP 07/13/18

Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington

Date: 08/22/18
By: Nick Gerkin
Figure: 5

Hydraulic Gradient is expressed in ft/ft



HYDRAULIC GRADIENT AND SHALLOW

1 04/11/18

2 07/13/18

AEROTECH ENVIRONMENTAL CONSULTING

ROSE DIAGRAM

Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington

Date: 08/22/18

By: Nick Gerkin

Figure: 6

- Project Contract Documents

ENVIRONMENTAL CONTRACTOR'S CERTIFICATION

Swindahl Properties LLC
2218 Marine View Drive
Tacoma, Washington 98422

1. Contractor's Name: Aerotech Environmental Consulting, Inc.

2. Contractor's Address: 13925 Interurban Avenue South, Ste. 210, Seattle, Washington 98168

3. Name and title of person completing this certification: Alan T. Blotch / President

4. Answer the following questions about each employee that contractor will have perform the assessment or prepare the report showing the results of the inspection:

   a. Name and Title of Employee: Alan T. Blotch – Environmental Professional

   b. Length of experience doing environmental assessments: 31 years

   c. Education degrees received: Masters of Business Administration
   Juris Doctor – Environmental Law

   d. Relevant training received: ASTM E50 Environmental Assessment Committee Meetings

5. Identify any certifications and approvals issued to contractor pursuant to an official Federal, State of local program or policy to conduct environmental assessments: Registered Environmental Assessor
   Issued by State of California

6. Describe the generally recognized standards which the contractor will use to perform the assessment. *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* (ASTM E 1903)

7. Disclose the nature of any previous environmental inspections contractor has ever performed for the Owner of the property: Phase I Environmental Site Assessment

8. Disclose the nature of any affiliation or association contractor now has, or ever had, with the above referenced seller of the property, of the above referenced buyer of the property: N/A

9. Describe the liability insurance carried by contractor to cover claims in the event that it fails to discover adverse environmental conditions during an environmental inspection.
   Professional Errors & Omissions Coverage $1,000,000 / claim and $1,000,000 aggregate liability

THE UNDERSIGNED HEREBY CERTIFIES, UNDER PENALTY OF THE CRIMINAL AND/OR CIVIL PENALTIES IN 18 U.S.C. § 1001 FOR FALSE STATEMENTS TO THE UNITED STATES GOVERNMENT, THAT THE ABOVE INFORMATION IS TRUE AND CORRECT.

Signature

7-26-18
Date

- Laboratory Analytical Report and Chain of Custody

ADVANCED ANALYTICAL

Environmental Testing Laboratory

July 19, 2018

Nick Gerkin
Aerotech Environmental, Inc.
13925 Interurban Avenue South, Suite 210
Seattle, WA 98168

Dear Mr. Gerkin:

Please find enclosed the analytical data report for the *Modutech Marine (Swindahl Properties) (**C80713-1**)* Project.

Samples were received on *July 13, 2018.* The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 702-8571.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

4078 148 Ave NE■ Redmond, WA 98052
425.702-8571
E-mail: aachemlab@yahoo.com

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number:	C80713-1
Client:	Aerotech Environmental
Project Manager:	Nick Gerkin
Client Project Name:	Modutech Marine (Swindahl Properties)
Client Project Number:	na
Date received:	07/13/18

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number:	C80713-1
Client:	Aerotech Environmental
Project Manager:	Nick Gerkin
Client Project Name:	Modutech Marine (Swindahl Properties)
Client Project Number:	na
Date received:	07/13/18

Analytical Results

BTEX 8021B, µg/L		MTH BLK	LCS	W-MW4	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	07/16/18	07/16/18	07/16/18	07/16/18	07/16/18	07/16/18
BTEX 8021B, µg/L							
Benzene	1.0	nd	84%	nd	76%	83%	9%
Toluene	1.0	nd	89%	nd	86%	91%	5%
Ethylbenzene	1.0	nd		nd			
Xylenes	1.0	nd		nd			
Surrogate recoveries:							
Trifluorotoluene		91%	89%	77%	97%	92%	
Bromofluorobenzene		108%	104%	110%	114%	105%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
C - coelution with sample peaks
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number:	C80713-1
Client:	Aerotech Environmental
Project Manager:	Nick Gerkin
Client Project Name:	Modutech Marine (Swindahl Properties)
Client Project Number:	na
Date received:	07/13/18

Analytical Results

NWTPH-Dx, ug/L		**MTH BLK**	**W-MW4**
Matrix	Water	Water	Water
Date extracted	Reporting	07/15/18	07/15/18
Date analyzed	Limits	07/15/18	07/15/18
Kerosene/Jet fuel	200	nd	nd
Diesel/Fuel oil	200	nd	nd
Heavy oil	500	nd	nd
Surrogate recoveries:			
Fluorobiphenyl		91%	85%
o-Terphenyl		120%	85%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
C - coelution with sample peaks
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number: C80713-1
Client: Aerotech Environmental
Project Manager: Nick Gerkin
Client Project Name: Modutech Marine (Swindahl Properties)
Client Project Number: na
Date received: 07/13/18

Analytical Results

PAH(8270), ug/L		MTH BLK	LCS	W-MW4	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	07/15/18	07/15/18	07/15/18	07/15/18	07/15/18	07/15/18
Date analyzed	Limits	07/15/18	07/15/18	07/15/18	07/15/18	07/15/18	07/15/18
Naphthalene	0.1	nd		4.7			
1-MethylNaphthalene	0.1	nd		0.64			
2-MethylNaphthalene	0.1	nd		0.16			
Acenaphthylene	0.1	nd		nd			
Acenaphthene	0.1	nd	114%	0.56	115%	120%	4%
Fluorene	0.1	nd		nd			
Phenanthrene	0.1	nd		0.32			
Anthracene	0.1	nd		nd			
Fluoranthene	0.1	nd		nd			
Pyrene	0.1	nd	103%	nd	106%	108%	1%
Benzo(a)anthracene	0.1	nd		nd			
Chrysene	0.1	nd		nd			
Benzo(b)fluoranthene	0.1	nd		nd			
Benzo(k)fluoranthene	0.1	nd		nd			
Benzo(a)pyrene	0.1	nd		nd			
Indeno(1,2,3-cd)pyrene	0.1	nd		nd			
Dibenzo(ah)anthracene	0.1	nd		nd			
Benzo(ghi)perylene	0.1	nd		nd			

Surrogate recoveries:

Fluorobiphenyl	79%	54%	87%	55%	54%	
o-Terphenyl	101%	95%	98%	93%	97%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Acceptable Recovery limits: 50% TO 150%
Acceptable RPD limit: 50%

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number: C80713-1
Client: Aerotech Environmental
Project Manager: Nick Gerkin
Client Project Name: Modutech Marine (Swindahl Properties)
Client Project Number: na
Date received: 07/13/18

Analytical Results

Metals Total (7010), ug/L		MTH BLK	LCS	W-MW1	W-MW2	W-MW3	W-MW4
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18
Date analyzed	Limits	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18
Lead Total (Pb)	2.0	nd	97%	nd	nd	nd	nd
Arsenic Total (Pb)	2.0	nd	126%	3.0	nd	nd	nd

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number:	C80713-1
Client:	Aerotech Environmental
Project Manager:	Nick Gerkin
Client Project Name:	Modutech Marine (Swindal
Client Project Number:	na
Date received:	07/13/18

Analytical Results

Metals Total (7010), ug/L		MS	MSD	RPD
Matrix	Water	Water	Water	Water
Date extracted	Reporting	07/17/18	07/17/18	07/17/18
Date analyzed	Limits	07/17/18	07/17/18	07/17/18
Lead Total (Pb)	2.0	105%	104%	1%
Arsenic Total (Pb)	2.0	129%	126%	3%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number: C80713-1
Client: Aerotech Environmental
Project Manager: Nick Gerkin
Client Project Name: Modutech Marine (Swindahl Properties)
Client Project Number: na
Date received: 07/13/18

Analytical Results

Metals Dissolved (7010), ug/L		MTH BLK	LCS	W-MW1	W-MW2	W-MW3	W-MW4
Matrix	Water	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18
Date analyzed	Limits	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18	07/17/18
Lead Dissolved (Pb)	2.0	nd	97%	nd	nd	nd	nd
Arsenic Dissolved (Pb)	2.0	nd	126%	nd	nd	nd	nd

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number:	C80713-1
Client:	Aerotech Environmental
Project Manager:	Nick Gerkin
Client Project Name:	Modutech Marine (Swind
Client Project Number:	na
Date received:	07/13/18

Analytical Results

Metals Dissolved (7010), ug/L		MS	MSD	RPD
Matrix	Water	Water	Water	Water
Date extracted	Reporting	07/17/18	07/17/18	07/17/18
Date analyzed	Limits	07/17/18	07/17/18	07/17/18
Lead Dissolved (Pb)	2.0	105%	104%	1%
Arsenic Dissolved (Pb)	2.0	129%	126%	3%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

ADVANCED ANALYTICAL

Chain of Custody Record

Page of

Laboratory Job #: C80713-1

4078 148 Avenue NE
Redmond, WA 98052
(425) 702-8571
aachemlab@yahoo.com

Client: Aerotech Environmental consulting
Project Name: Modutech marine (Swinglahl Properties)
Project Manager: Nick Gerkin / Devin Melville
Project Number: —
Address: 13925 Interurban Ave South, Tukwila
Collector: Devin Melville
Phone: (206) 799-4604 Fax:
Date of collection: 7-13-18

	Sample ID	Time	Matrix	Container type	8260 Volatiles	HVOC 8260	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx Extended	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	MTCA5 Metals	total + Arsenic	Lead + Arsenic DK	Notes, comments	# of containers
1	W-MW1	0925	W	2 VOA 1 AMB 1 Poly												X		X				4
2	W-MW2	1022														X		X				4
3	W-MW3	1100														X		X				4
4	W-MW4	1148		2 VOA 2 Amb 1 Poly			X		X			X				X		X				5
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Relinquished by:	Date/Time	Received by:	Date/Time
Devin Melville	7/13/18	[illegible]	07/13/18/14
Relinquished by:	Date/Time	Received by:	Date/Time
Devin Melville	7/13/18		

Sample receipt info:

Total # of containers:
Condition (temp, °C)
Seals (intact?, Y/N)
Comments:

Turnaround time:

Same day ○
24 hr ○
48 hr ○
Standard ⊗

- Standard Operating Procedure

AEROTECH
Environmental Consulting Inc.
13925 Interurban Avenue South, Suite No.210
Seattle, Washington 98168
(360)710-5899

512 W. International Airport Road, Suite 201
Anchorage, Alaska 99518
(907) 575-6661

LOW-FLOW GROUNDWATER SAMPLING STANDARD OPERATING PROCEDURE

The following protocol and sampling procedures were designed to meet or exceed standards for groundwater monitoring well sampling, as specified by the State of Washington Department of Ecology *"Standard Operating Procedures for Purging and Sampling Monitoring Wells, Version 1.0,"* dated and approved on October 4, 2011. These procedures are strictly adhered to by Aerotech field staff:

Cross-Contamination Mitigation Protocol

A sampling table is set up adjacent to the well head in order to protect field equipment from contact with the ground, to prevent or minimize the possible introduction of foreign materials into the wells, and in general in order to mitigate the possibility of cross-contamination. Where previous laboratory data is available, or where visual of olfactory indicators provide initial evidence, well sampling order is arranged to proceed with the least contaminated well, often the upgradient groundwater monitoring wells, and sampling order proceeds by sampling wells associated with successively higher contamination levels. Thus, the wells exhibiting the highest contamination levels are sampled last, in order to minimize the possibility of cross contamination.

A fresh pair of disposable Nitrile gloves is worn at each well. Equipment neither disposable nor dedicated to wells, is washed in a dedicated container prepared with non-phosphate Alconox detergent and triple rinsed in a second container prepared with distilled and/or deionized water. Surfaces that cannot be readily submerged for the purpose of decontamination, are sprayed with wash water followed by rinse water, and wiped with a fresh disposable paper towel. For shallow wells that require a peristaltic pump, dedicated tubing is left in each well after sampling, however, for deeper wells that require a submersible pump, dedicated tubing is recovered from wells after each use, and deployed to a designated dedicated clean plastic bag, bearing a label indicating well identification information.

Water Level Measurement

Prior to the well purge process and the collection of groundwater samples, groundwater levels are measured at the north side of the ("TOC") with a piezometer/water level indicator, by slowly lowering the sensor into wells prior to purging, in order to minimize disturbances. The water levels are measured twice, with tape marked in 0.01 foot increments, in order to reduce possible reading error. Where appropriate, free product thickness is measured with gas level indicator paste or an interface indicator. Upon arrival at the well and visual inspection, the condition of the well and well head.

Groundwater Monitoring Well Purge and Sampling Methodologies

Prior to groundwater sample collection, A dedicated length of high density polyethylene tubing is lowered into each well to a level near the middle of the screened interval. A dedicated

length of clean silicone tubing is utilized within the pump mechanism. The wells are purged by means of low flow techniques, during which time groundwater is monitored for physical parameters, including temperature, pH, specific conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP), by means of a multi-parameter device mounted upon a flow cell, until such time as values recorded have stabilized and equilibrium conditions are verified according to State guidelines. This protocol ensures that collected groundwater samples are representative of in-situ groundwater conditions. Readings are recorded once every 2 to 5 minutes, including water level measurement. The pumping rate shall remain below 1 L/min during monitoring and sampling procedures. This is verified by periodically filling a one-Liter graduated cylinder and recording the rate, adjusting the pump as necessary. The water column within the well should remain within 5% of the static height during the purge and sample process, if this cannot be achieved, the pump rate will be reduced until the water level stabilizes. The following conditions must be met in three consecutive readings prior to sampling:

- pH +/- 0.1 standard units
- Specific Conductivity +/- 10.0 µmhos/cm for values < 1,000 µmhos/cm
+/- 20.0 µmhos/cm for values > 1,000 µmhos/cm
- DO +/- 0.05 mg/L for values < 1 mg/L
+/- 0.2 mg/L for values > 1 mg/L
- Temperature +/- 0.1 degrees Celsius
- ORP +/- 10 mV

Groundwater samples are collected in containers specified by the laboratory for the analyses established at the Site, and in accordance with State of Washington regulations or guidelines. Sample containers are labeled with site name, well identification, and date of collection information. Each sample is documented on a *Chain of Custody* (“”COC”) form, and immediately placed in an iced cooler (maintained at 4 degrees Celsius or less) for transport to a certified laboratory for analysis. Please note that any purge water suspected or confirmed to contain concentrations above the MTCA Cleanup Levels is drummed and left on Site.

Please feel free to contact the Aerotech Geologist Mr. Simon Payne at (206) 741-1651, or the Aerotech Environmental Scientist/Field Sampling Coordinator, Mr. Nicholas Gerkin, at (206) 257-4211, if you have questions regarding work completed at this Site.

- Field Documentation

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GROUNDWATER MONITORING WELL GAUGING RECORD

FIELD CREW: DRM	**PROJECT NAME:** Swindahl Properties LLC
DATE: 07/13/18	**PROJECT ADDRESS:** 2218 Marine View Drive, Tacoma, Washington

Well ID	Time	Wellhead Elevation	Depth to Water	Groundwater Elevation	Depth of Well	Well Diameter	Comments
	hh:mm	Feet Above MSL	Feet Below TOC	Feet Above MSL	Feet Below TOC	Inches	
MW1	8:28	11.75	5.01	6.74	18.5	2	Well is new and in great condition
MW2	8:32	10.27	9.35	0.92	18.9	2	Well is new and in great condition
MW3	8:33	10.72	8.95	1.77	19.3	2	Well is new and in great condition
MW4	8:34	11.02	7.10	3.92	19.6	2	Well is new and in great condition

EXPLANATION

MSL = Mean Sea Level

TOC = Top of Casing

-- = Not Measured or Not Calculated

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GROUNDWATER MONITORING WELL
LOW FLOW SAMPLING FIELD LOG

FIELD CREW: DRM	**PROJECT NAME:** Swindahl Properties LLC
DATE: 07/13/18	**PROJECT ADDRESS:** 2218 Marine View Drive, Tacoma, Washington

MW1		Purge Start:	8:54	Purge Stop:	9:25	Purge V (L):	**4.96**
Time	**DTW**	**Purge Rate**	**Temperature**	**Specific Conductivity**	**DO**	**pH**	**ORP**
hr:min	feet	mL/min	°C	mS/cm	mg/L	unit	mV
08:28	5.01	--	--	--	--	--	--
08:54	5.25	160	17.8	327.9	4.97	6.70	168.9
08:56	5.28	160	17.8	317.1	4.68	6.67	87.8
08:58	5.28	160	17.8	301.3	4.36	6.69	35.3
09:00	5.28	160	17.8	296.5	3.99	6.69	14.5
09:02	5.30	160	17.8	294.5	3.87	6.70	1.4
09:04	5.35	160	17.8	292.9	3.55	6.71	-8.3
09:06	5.35	160	17.8	292.4	3.25	6.71	-17.3
09:08	5.35	160	17.8	293.3	3.07	6.70	-24.6
09:10	5.35	160	17.8	293.6	2.87	6.71	-31.6
09:12	5.38	160	17.8	294.4	3.01	6.71	-35.6
09:14	5.38	160	17.8	294.3	2.69	6.70	-39.2
09:16	5.40	160	17.8	295.2	2.43	6.70	-43.0
09:18	5.40	160	17.9	294.6	2.07	6.71	-48.5
09:20	5.45	160	17.9	295.4	1.86	6.71	-50.9
09:22	5.45	160	17.9	295.8	1.78	6.71	-52.1
09:24	5.45	160	17.9	296.5	1.66	6.71	-53.6
Ecology Parameter Limits (3 Consecutive Readings)			**+/- 0.1**	**+/- 10**	**+/- 0.2**	**+/- 0.1**	**+/- 10**
09:25	**SAMPLE**	--	--	--	--	--	--

Comments:

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GROUNDWATER MONITORING WELL
LOW FLOW SAMPLING FIELD LOG

FIELD CREW: DRM	**PROJECT NAME:** Swindahl Properties LLC
DATE: 07/13/18	**PROJECT ADDRESS:** 2218 Marine View Drive, Tacoma, Washington

MW2		Purge Start:	9:46	Purge Stop:	10:22	Purge V (L):	**6.12**
Time	**DTW**	**Purge Rate**	**Temperature**	**Specific Conductivity**	**DO**	**pH**	**ORP**
hr:min	feet	mL/min	°C	mS/cm	mg/L	unit	mV
08:32	9.35	--	--	--	--	--	--
09:46	9.73	170	16.5	33,107	12.84	7.16	-84.1
09:48	9.73	170	16.5	33,185	12.71	7.26	-83.3
09:50	9.79	170	16.6	33,208	13.06	7.32	-81.0
09:52	9.79	170	16.6	33,166	12.42	7.37	-78.1
09:54	9.81	170	16.7	33,197	12.84	7.42	-74.4
09:56	9.81	170	16.8	33,144	12.66	7.44	-70.8
09:58	9.84	170	16.9	33,082	12.10	7.46	67.5
10:00	9.84	170	17.0	33,042	12.17	7.48	-65.0
10:02	9.84	170	17.0	32,866	11.75	7.49	-62.2
10:04	9.87	170	17.2	32,575	12.15	7.51	-59.2
10:06	9.87	170	17.2	32,469	12.74	7.54	-56.8
10:08	9.87	170	17.3	32,275	13.66	7.57	-54.4
10:10	9.87	170	16.6	32,909	14.12	7.58	-51.1
10:12	9.87	170	17.0	32,378	15.14	7.61	-48.8
10:14	9.87	170	17.0	32,217	15.88	7.62	-45.8
10:16	9.87	170	17.1	32,079	16.28	7.65	-42.9
10:18	9.93	170	17.2	31,946	16.55	7.67	-39.1
10:20	9.93	170	17.3	31,825	16.57	7.69	-36.0
10:22	9.93	170	17.3	31,863	16.89	7.71	-32.1
Ecology Parameter Limits (3 Consecutive Readings)			**+/- 0.1**	**+/- 10**	**+/- 0.2**	**+/- 0.1**	**+/- 10**
10:22	**SAMPLE**	--	--	--	--	--	--

Comments:

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GROUNDWATER MONITORING WELL
LOW FLOW SAMPLING FIELD LOG

FIELD CREW: DRM	**PROJECT NAME:** Swindahl Properties LLC
DATE: 07/13/18	**PROJECT ADDRESS:** 2218 Marine View Drive, Tacoma, Washington

MW3		Purge Start:	10:41	Purge Stop:	11:00	Purge V (L):	**3.80**
Time	**DTW**	**Purge Rate**	**Temperature**	**Specific Conductivity**	**DO**	**pH**	**ORP**
hr:min	feet	mL/min	°C	mS/cm	mg/L	unit	mV
08:33	8.95	--	--	--	--	--	--
10:41	9.13	200	17.6	34,347	1.15	7.75	-10.4
10:43	9.16	200	17.5	34,398	0.98	7.75	-14.0
10:45	9.16	200	17.6	34,390	0.87	7.74	-16.8
10:47	9.16	200	17.3	34,431	0.85	7.74	-19.5
10:49	9.16	200	17.4	34,402	0.76	7.73	-19.6
01:51	9.16	200	17.5	34,393	0.70	7.74	-20.9
10:53	9.18	200	17.4	34,416	0.71	7.74	-21.7
10:55	9.18	200	17.5	34,380	0.63	7.73	-22.4
10:57	9.18	200	17.4	34,409	0.63	7.74	-22.7
10:59	9.18	200	17.5	34,389	0.62	7.73	-23.2
Ecology Parameter Limits (3 Consecutive Readings)			**+/- 0.1**	**+/- 10**	**+/- 0.2**	**+/- 0.1**	**+/- 10**
11:00	**SAMPLE**	--	--	--	--	--	--
Comments:							

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GROUNDWATER MONITORING WELL
LOW FLOW SAMPLING FIELD LOG

FIELD CREW: DRM	**PROJECT NAME:** Swindahl Properties LLC
DATE: 07/13/18	**PROJECT ADDRESS:** 2218 Marine View Drive, Tacoma, Washington

MW4		Purge Start:	11:20	Purge Stop:	11:48	Purge V (L):	**7.00**
Time	**DTW**	**Purge Rate**	**Temperature**	**Specific Conductivity**	**DO**	**pH**	**ORP**
hr:min	feet	mL/min	°C	mS/cm	mg/L	unit	mV
08:34	7.10	--	--	--	--	--	--
11:20	7.77	250	15.4	3643	8.74	7.31	7.2
11:22	7.77	250	15.5	3570	9.11	7.26	-14.6
11:24	7.89	175	15.8	3493	6.64	7.24	-26.1
11:26	7.89	175	15.8	3472	1.88	7.24	-39.9
11:28	7.89	175	15.8	3462	4.25	7.23	-46.6
11:30	8.08	175	15.8	3475	2.82	7.21	-56.9
11:32	8.08	175	15.8	3491	2.65	7.22	-60.0
11:34	8.15	175	15.9	3505	2.28	7.20	-65.0
11:36	8.15	175	16.2	3528	2.34	7.19	-69.2
11:38	8.21	175	16.2	3577	2.01	7.20	-73.1
11:40	8.21	175	16.1	3611	1.18	7.20	-76.0
11:42	8.27	175	16.1	3645	0.82	7.20	-78.7
11:44	8.27	175	16.2	3673	1.06	7.19	-81.3
11:46	8.32	175	16.1	3680	0.78	7.20	-83.0
11:48	8.32	175	15.9	3700	0.78	7.20	-84.8
Ecology Parameter Limits (3 Consecutive Readings)			**+/- 0.1**	**+/- 10**	**+/- 0.2**	**+/- 0.1**	**+/- 10**
11:48	**SAMPLE**	--	--	--	--	--	--

Comments: