# **GROUNDWATER MONITORING REPORT:**

# **APRIL AND JULY 2015**

**PNEC Corp Former Bulk Petroleum Facility Shepard Way NW & Bromley Place NW** Bainbridge Island, Kitsap County, Washington

> August 21, 2015 Project No. 81147093B

# **Prepared for:**

PNEC Corp dba SC Fuels Orange, California

# Prepared by:

Terracon Consultants, Inc. 21905 64th Avenue, Suite 100 Mountlake Terrace, WA 98042

Offices Nationwide Employee-Owned

Established in 1965 terracon.com





August 21, 2015

SC Fuels/PNEC Corp 1800 West Katella Avenue, Suite 400 Orange, California 92867

Attn: Mr. De Holbrook

Re: Groundwater Monitoring Report - April and July 2015

PNEC Corp Former Bulk Petroleum Facility Shepard Way NW & Bromley Place NW

Bainbridge Island, Kitsap County, Washington

Terracon Project No. 81147093B

Dear Mr. Holbrook:

Terracon Consultants, Inc. (Terracon) is pleased to submit this Groundwater Monitoring Report for the above referenced site. This work was performed in general accordance with Terracon Proposal No. P81150111 dated April 3, 2015, and the terms, conditions and limitations in the Environmental Consulting Agreement between Terracon Consultants, Inc. and Pacific Northwest Energy Corporation (PNEC Corp), d.b.a. SC Fuels, dated April 3, 2015.

We appreciate the opportunity to perform these services for SC Fuels/PNEC Corp. Please contact either of the undersigned at 425-771-3304 if you have questions regarding the information provided in the report.

Sincerely,

Terracon

Jamie L. Hoffman, P.G. Senior Staff Geologist

Michael D. Noll, L.G., L.H.G. Senior Project Manager

# **TABLE OF CONTENTS**

1.0	INTRODUCTION	1
1.1		
1.2	STANDARD OF CARE	2
1.3	ADDITIONAL SCOPE LIMITATIONS	2
1.4	RELIANCE	3
2.0	SITE HISTORY AND PREVIOUS SAMPLING EVENTS	3
3.0	GROUNDWATER SAMPLING	4
3.1	APRIL 2015 GROUNDWATER SAMPLING EVENT	5
3.2	JULY 2015 GROUNDWATER SAMPLING EVENT	5
3.3	ANALYTICAL LABORATORY TESTING	5
3.3	QUALITY ASSURANCE/QUALITY CONTROL RESULTS	6
4.0	LABORATORY ANALYTICAL RESULTS	7
5.0	FINDINGS AND CONCLUSIONS	7
	RECOMMENDATIONS	_

- Figure 1 Topographic Map
- Figure 2 Site Diagram
- Figure 3 Groundwater Contour Map April 9, 2015
- Figure 4 Groundwater Contour Map July 1, 2015

# **TABLES**

- Table 1 Summary of Depth to Groundwater Measurements
- Table 2 Summary of Groundwater Analytical Results

# **APPENDICES**

Appendix A – Analytical Laboratory Reports & Chain-of-Custody Documentation

#### **GROUNDWATER MONITORING REPORT – APRIL AND JULY 2015**

# PNEC Corp Former Bulk Petroleum Facility Shepard Way NW & Bromley Place NW Bainbridge Island, Kitsap County, Washington

Terracon Project No. 81147093B August 21, 2015

#### 1.0 INTRODUCTION

This groundwater monitoring report documents additional post-groundwater treatment sampling activities that were conducted at the PNEC Corp Former Bulk Petroleum Facility site (Site), located on the southwest corner of Shepard Way NW & Bromley Place NW in Bainbridge Island, Kitsap County, Washington. Groundwater sampling was performed in April and July 2015. The property (Kitsap County Parcel No. 272502-4-005-2011) covers approximately 0.9 acres. A Topographic Map is included as Figure 1 that shows the Site in relation to the surrounding area. Figure 2 presents the locations of the monitoring wells and former features at the Site. Figure 3 depicts the April 2015 groundwater migration direction. Figure 4 depicts the July 2015 groundwater migration direction.

# 1.1 Scope of Work

Terracon Consultants, Inc. (Terracon) conducted follow-up groundwater monitoring at select wells, in general accordance with Terracon Proposal No. P81150111 dated April 3, 2015, and the terms, conditions and limitations in the Environmental Consulting Agreement between Terracon Consultants, Inc. and PNEC Corp., d.b.a. SC Fuels, dated April 3, 2015.

Terracon completed a Washington Department of Ecology (Ecology) underground injection control (UIC) site well registration for remediation well RW-1, and injected Regenesis RegenOx® Part A and Part B solution into RW-1 in an effort to treat site groundwater for residual diesel-range petroleum hydrocarbon impacts at nearby site groundwater monitoring wells MW-2A and MW-5. After a period of approximately three weeks, Terracon began follow-up groundwater monitoring at wells MW-2A, MW-5, and RW-1 to further evaluate concentrations of diesel-range total petroleum hydrocarbons (TPH) at the Site.



Terracon Consultants, Inc. 21905 64th Avenue West, Suite 100 Mountlake Terrace, WA 98043 P [425] 771 3304 F [425] 771 3549 terracon.com



The groundwater remedial treatment work was performed as an independent action intended to meet the requirements of the Washington State Model Toxics Control Act (MTCA) Cleanup Regulation, as established in Chapter 173-340 of the Washington Administrative Code (WAC173-340), in order to achieve regulatory closure. Work was performed in general accordance with MTCA and the *Guidance for Remediation of Petroleum Contaminated Sites*, Ecology Publication No. 10-09-057, dated September 2011.

This report includes a description of the second and third post-injection groundwater sample collection activities, tables showing current and historical depth to groundwater measurements and analytical results, and copies of the analytical laboratory reports with chain-of-custody documentation.

#### 1.2 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These groundwater remedial treatment and follow-up monitoring services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal.

#### 1.3 Additional Scope Limitations

This report was intended to reduce, but not eliminate, uncertainty regarding the existence of recognized environmental conditions in connection with the subject site. Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this groundwater sampling event. Subsurface conditions may vary from those encountered at the time of construction or at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services. If, during future site development, different subsurface conditions from those encountered during our explorations are observed or appear to be present, we must be advised promptly so that we can review



these conditions and reconsider or modify our conclusions and recommendations where necessary.

#### 1.4 Reliance

This report has been prepared for the exclusive use and reliance of PNEC Corp/SC Fuels. Use or reliance by any other party is prohibited without the written authorization of PNEC Corp/SC Fuels and Terracon.

Reliance on this report by the client and all authorized parties will be subject to the terms, conditions and limitations stated in this report and Terracon's agreement for services. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

#### 2.0 SITE HISTORY AND PREVIOUS SAMPLING EVENTS

A former on-site bulk petroleum storage facility was constructed about 1970, and was used primarily for heating oil storage. PNEC Corp purchased the Site in June 1997. Former site AST, pumping station, and overhead loading rack structures were removed in 1997. The attached Figure 2 Site Diagram shows the approximate locations of former site features.

Five groundwater monitoring wells (MW-1 through MW-5) were installed at the Site by others in June 2001 (Figure 2). Well MW-2 was excavated and removed during petroleum-contaminated soil (PCS) excavation work in March 2003, and replacement well MW-2A and remediation well RW-1 were installed at that time. Measured depth to groundwater in the wells has ranged from approximately 4 to 11 feet below the top of the well casing (TOC), with an inferred groundwater flow direction that varies, but flows mainly toward the south and southwest. Groundwater samples were collected from the wells on a quarterly or annual basis between 2001 and 2007. Samples were analyzed for gasoline-, diesel-, and oil-range TPH; benzene, toluene, ethylbenzene, and xylenes (BTEX); volatile organic hydrocarbons (VOCs); polycyclic aromatic hydrocarbons (PAHs); and/or total and dissolved lead. Diesel-range TPH (1,100 micrograms per liter [µg/L]) was detected in well MW-5 in June 2007, at a concentration exceeding the MTCA Method A cleanup level (500 μg/L). All other laboratory analytical results for the groundwater samples collected from the site wells in June 2007 were below the MTCA Method A or Method B cleanup levels. Historical groundwater data collected from the Site in 2006 and 2007 are included in Table 1 and Table 2.



Terracon collected groundwater samples from wells MW-1, MW-2A, MW-3, MW-4, MW-5, and RW-1 in August 2014. Prior to that sampling event, no groundwater samples had been collected from the Site since June 2007. The results were documented in our report, *Groundwater Monitoring Report: August 2014*, dated September 30, 2014. Diesel-range TPH was identified in the samples collected from groundwater monitoring wells MW-2A and MW-5 at concentrations of 920 µg/L and 800 µg/L, respectively, exceeding the MTCA Method A cleanup level. Gasoline-range TPH, BTEX compounds, and total lead were not identified above the laboratory method reporting limits (MRLs) in any of the samples collected. The groundwater flow direction was generally toward the south and southwest, consistent with previous results. It appeared that the groundwater in the vicinity of monitoring wells MW-2A and MW-5 remained impacted with residual diesel-range TPH.

In January 2015, Terracon completed remedial injections on the Site. Approximately 360 pounds of RegenOx® Part A and 240 pounds of RegenOx® Part B were mixed with 1,325 gallons of potable water. The RegenOx® Part A and Part B were mixed in batches, at a ratio of approximately 1 pound RegenOx® Part A or Part B to 2 to 3 gallons of water, for a concentration of approximately 3.5% to 4.5%. The RegenOx® Part A and Part B mixtures were pumped into well RW-1 at a pumping rate of approximately 4 gallon per minute (gpm).

After a period of approximately three weeks following the RegenOx® Part A and Part B injections, Terracon measured depth to groundwater and collected groundwater samples from wells MW-2A, MW-5, and RW-1. The groundwater sample collected from MW-5 had a diesel-range TPH concentration of 1,200  $\mu$ g/L and an oil-range TPH concentration of 560  $\mu$ g/L, both exceeding the Model Toxics Control Act (MTCA) Method A cleanup level of 500  $\mu$ g/L.

#### 3.0 GROUNDWATER SAMPLING

On April 9 and July 1, 2015, Terracon measured depth to groundwater and collected groundwater samples from wells MW-2A, MW-5, and RW-1. Depth to groundwater in each well was measured prior to sample collection. The water level probe was cleaned using an Alconox® wash and distilled water rinse before use in each well.

The wells were purged using a peristaltic pump equipped with clean tubing. Low-flow groundwater discharge rates were maintained during purging in order to minimize the drawdown of the water level in the wells. Groundwater parameters (pH, temperature, specific conductance, and dissolved oxygen) were measured during well purging using a multifunction meter and a flow-through cell. Samples were collected when all parameters were within 10% for two consecutive readings.



The purge water was stored onsite in a steel, Department of Transportation (DOT) approved, 55-gallon drum. The drum was properly labeled and left onsite near well MW-1 pending receipt of laboratory analytical results. Following the stabilization of measured groundwater parameters, samples were collected utilizing the peristaltic pump. Discharge from the peristaltic pump was directed into laboratory provided glassware. Each sample container was labeled with the site name, date, time, and well/sample number.

# 3.1 April 2015 Groundwater Sampling Event

Measured depth to water ranged from 3.85 feet below TOC at well MW-3 to 5.21 feet below TOC at well RW-1 (Table 1). Measured depth to groundwater and TOC elevation data relative to a site datum were used to determine the relative groundwater elevation at each well. Based on groundwater level measurements collected during the April 2015 groundwater sampling event, groundwater flow direction at the Site was generally to the south and southwest (Figure 3).

Purge volumes were approximately 0.5 gallons from wells MW-2A, MW-5, and RW-1. The purge water from wells MW-2A and MW-5 was clear, with no sediment. The RW-1 purge water was light orange. No hydrocarbon-like odor was observed in the purge water from any of the wells.

#### 3.2 July 2015 Groundwater Sampling Event

Measured depth to water ranged from 6.93 feet below TOC at well MW-3 to 8.53 feet below TOC at well MW-1 (Table 1). Measured depth to groundwater and TOC elevation data relative to a site datum were used to determine the relative groundwater elevation at each well. Based on groundwater level measurements collected during the July 2015 groundwater sampling event, groundwater flow direction at the Site was generally to the south and southeast (Figure 4).

Purge volumes were approximately 0.5 gallons from wells MW-2A, MW-5, and RW-1. The purge water from wells MW-2A and MW-5 was clear, with no sediment. The RW-1 purge water was dark brown. No hydrocarbon-like odor was observed in the purge water from any of the wells.

# 3.3 Analytical Laboratory Testing

Groundwater samples from the April 2015 sampling event were delivered to Pace Analytical Services, Inc. in Minneapolis, Minnesota, and groundwater samples from the July 2015 sampling event were delivered to ALS Laboratory Group in Everett,



Washington. Both laboratories are Washington-accredited analytical laboratories. The groundwater samples were submitted for laboratory analysis for the following:

Diesel- and oil-range TPH via Northwest Method NWTPH-Dx.

The executed chain-of-custody forms and laboratory analytical certificates are provided in Appendix A. All analyses were completed using standard turnaround times.

# 3.3 Quality Assurance/Quality Control Results

The analytical results for the current investigation were checked for completeness immediately upon receipt from the laboratory to ensure that data and QA/QC information requested were present. Data quality was assessed by considering hold times, surrogate recovery, method blanks, matrix spike and matrix spike duplicate (MS/MSD) recovery, and detection limits. QA/QC review was completed using guidance described in *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (Draft Final, USEPA, 2005). Our evaluation assumes that the QA/QC is correct as reported by the laboratory, and merely provides an interpretation of the QA/QC results

- Hold Times: All analyses were completed within specified hold times.
- Surrogate Recoveries: All surrogate recoveries were within laboratory limits.
- Method Blanks: Analytes were not detected in any of the laboratory method blanks.
- MS/MSD Results: MS and MSD recoveries were all within laboratory limits, and Relative Percent Differences (RPDs) between MS and MSD recoveries were all within laboratory limits.
- <u>Laboratory Reporting Limits</u>: Reporting limits were below relevant MTCA cleanup levels.

Based upon our interpretation of quality control information provided by the laboratory, it is our opinion that the overall datasets are useable as qualified for the purposes of these groundwater sampling events.



# 4.0 LABORATORY ANALYTICAL RESULTS

A summary of analytical results for groundwater quality from the April 2015 and July 2015 sampling events area presented in Table 2. The results are tabulated, with the state cleanup levels included for comparison. The complete laboratory reports and chain-of-custody forms for analytical results from these sampling events are included in Appendix A.

#### **April 2015 Diesel- and Oil-Range Organics**

Diesel-range TPH was identified above the laboratory reporting limit in the samples collected from monitoring well MW-5 and remediation well RW-1. Diesel-range TPH was detected in the sample taken from MW-5 at a concentration of 940  $\mu$ g/L, and from RW-1 at a concentration of 540  $\mu$ g/L, both exceeding the MTCA Method A cleanup level of 500  $\mu$ g/L. No oil-range TPH was detected in the samples above the laboratory method reporting limit (MRL).

#### July 2015 Diesel- and Oil-Range Organics

Diesel-range TPH was identified above the laboratory reporting limit in each of the samples. The samples contained diesel-range TPH at concentrations ranging from 510  $\mu$ g/L in monitoring well MW-2A to 870  $\mu$ g/L in remediation well RW-1, exceeding the MTCA Method A cleanup level of 500  $\mu$ g/L. No oil-range TPH was detected in the samples above the laboratory MRL.

# 5.0 FINDINGS AND CONCLUSIONS

Wells MW-2A, MW-5, and RW-1 were sampled in April and July 2015, approximately 3 and 5 months following the RegenOx® injections.

Based on the results of the groundwater sampling events completed in April and July 2015, the findings and conclusions of this report are as follows:

- In April 2015, diesel-range TPH were identified in the sample collected from wells MW-5 and RW-1 at concentrations of 940 μg/L and 540 μg/L, respectively, exceeding the MTCA Method A cleanup level of 500 μg/L.
- In July 2015, diesel-range TPH was identified in the samples collected from wells MW-2A, MW-5, and RW-1 at concentrations ranging from 510 μg/L to 870 μg/L, exceeding the MTCA Method A cleanup level of 500 μg/L.
- The groundwater flow direction is generally toward the south.





It appears that the groundwater in the vicinity of wells MW-2A, MW-5, and RW-1 remains impacted with diesel-range petroleum hydrocarbons. Increases in diesel-range TPH concentrations during the July 2015 event are likely related to a seasonal variation in the groundwater table.

# 6.0 RECOMMENDATIONS

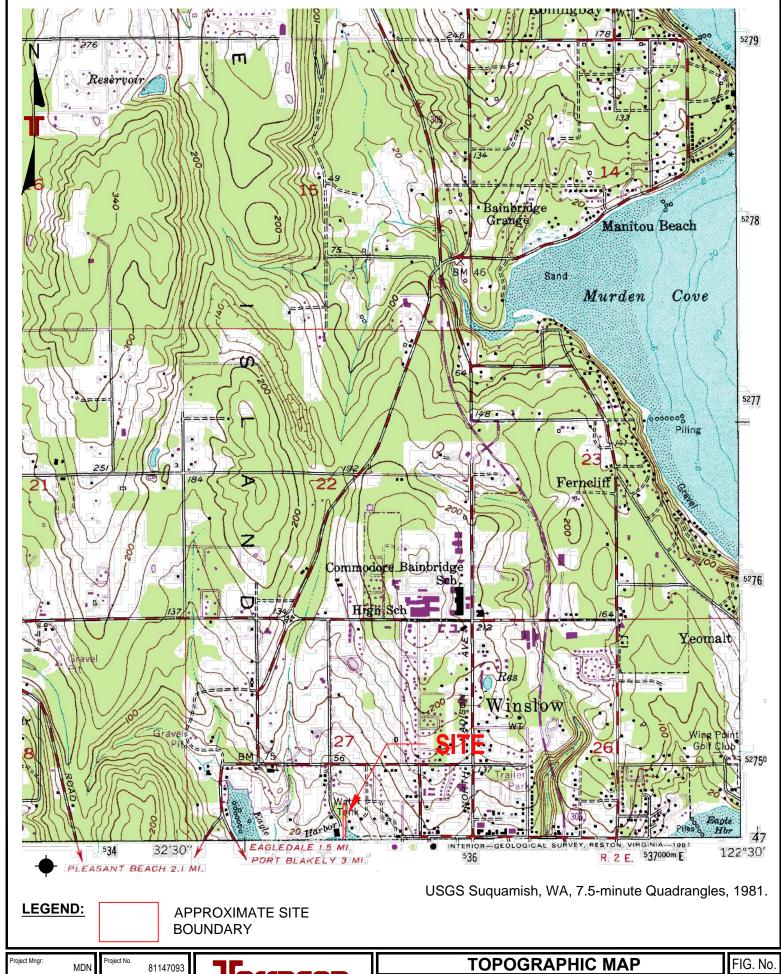
Based on the results of the groundwater monitoring conducted at the Site, Terracon recommends that additional remedial treatment and/or groundwater sampling be conducted at the site.

# **FIGURES**

Figure 1 - Topographic Map
Figure 2 - Site Diagram

Figure 3 – Groundwater Contour Map – April 9, 2015

Figure 4 – Groundwater Contour Map – July 1, 2015

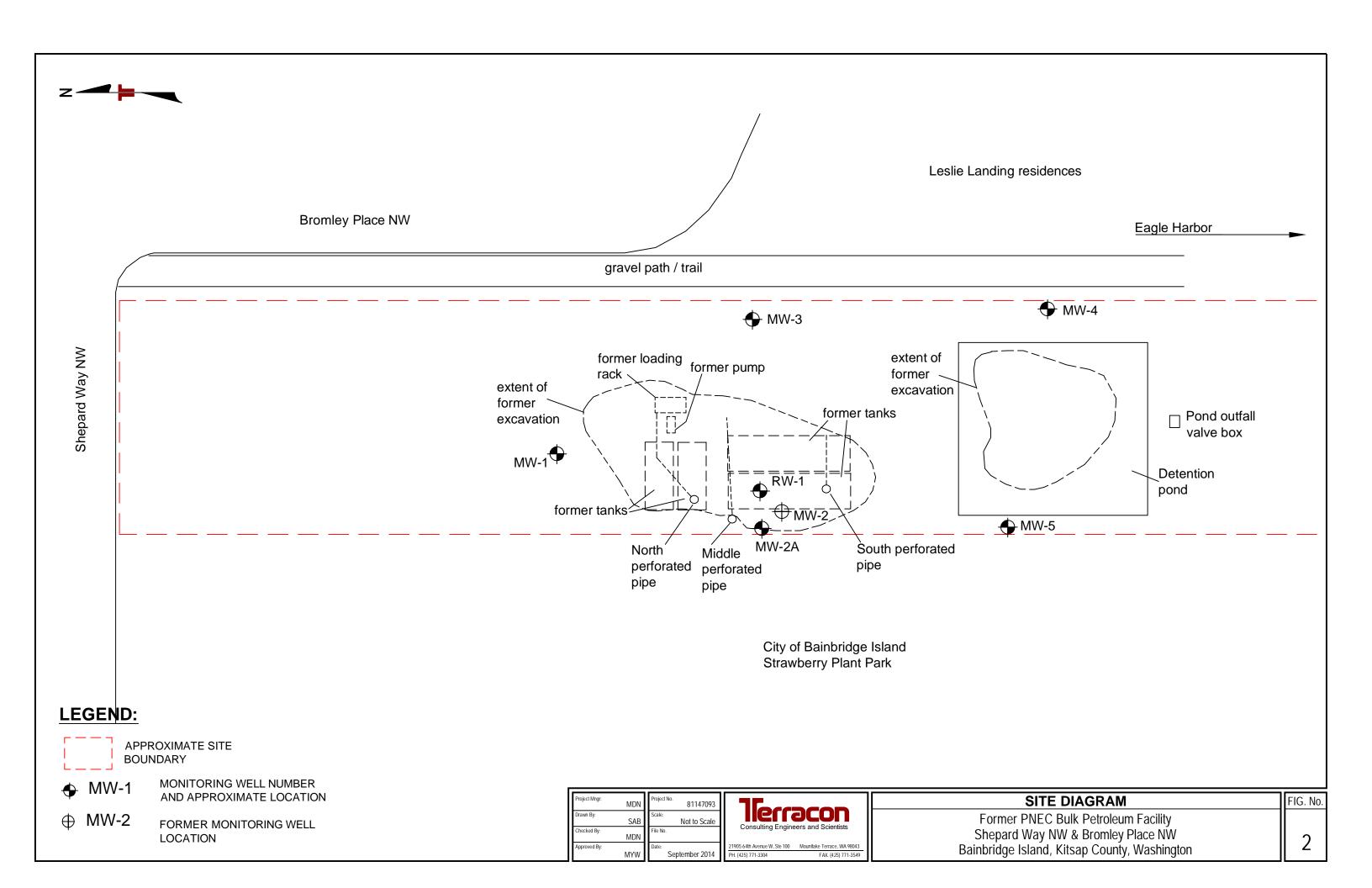


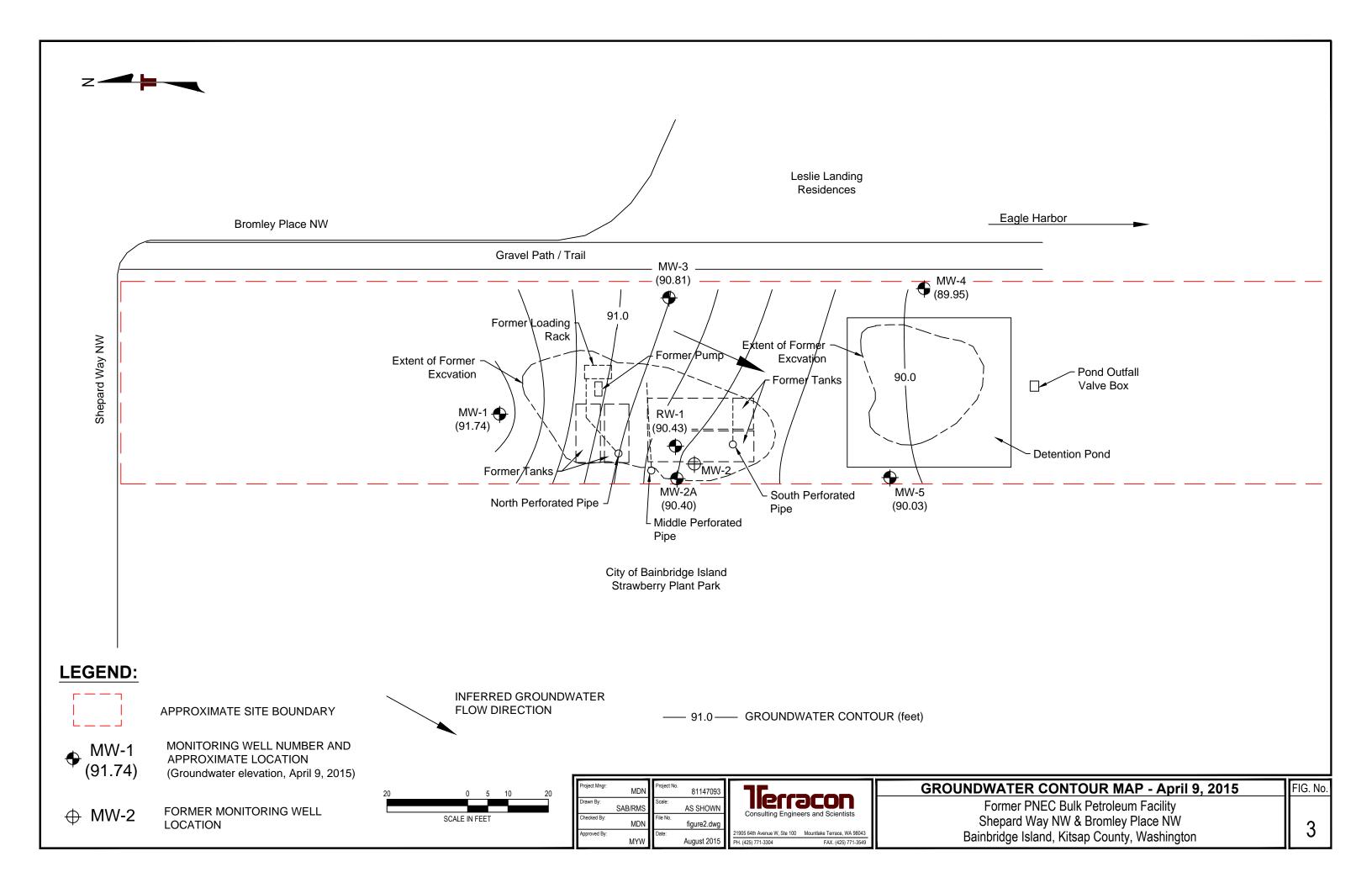
Drawn Bv: SAB Checked By: MDN Approved By: MYW

Not to Scale September 2014

21905 64th Avenue W., Ste 100 Mountlake Terrace, WA 98043

Former PNEC Bulk Petroleum Facility Shepard Way NW & Bromley Place NW Brainbridge Island, Kitsap County, Washington





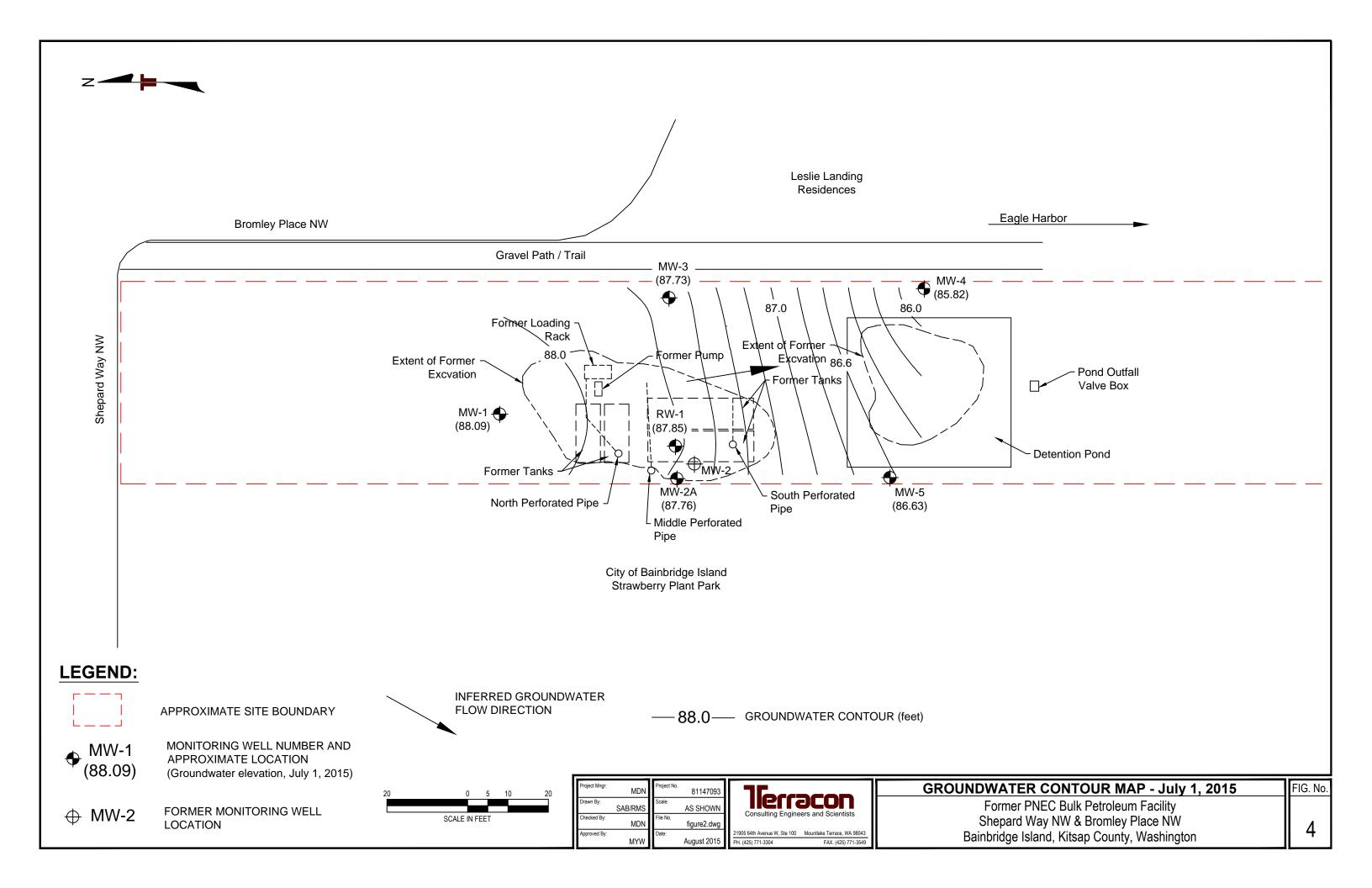


Table 1 – Summary of Depth to Groundwater Measurements

Table 2 – Summary of Groundwater Analytical Results

#### SUMMARY OF DEPTH TO GROUNDWATER MEASUREMENTS

# PNEC Former Bulk Petroleum Facility Shepard Way NW and Bromley Place NW

Bainbridge Island, Kitsap County, Washington

Well Number	Sampling Date	TOC Elevation (Feet)	Depth to Water (Feet)	Relative Groundwater Elevation (Feet
MW-1	9/13/2006	96.62	9.40	87.22
	12/20/2006		3.85	92.77
screened 4.8-14.8 feet	3/26/2007		4.49	92.13
	6/18/2007		7.08	89.54
	8/19/2014		9.00	87.62
	8/21/2014		9.09	87.53
	4/9/2015		4.88	91.74
	7/1/2015		8.53	88.09
MW-2A	9/13/2006	95.37	8.88	86.49
	12/20/2006		4.46	90.91
screened 4.8-14.8 feet	3/26/2007		4.79	90.58
	6/18/2007		6.78	88.59
	8/19/2014		8.24	87.13
	8/21/2014		8.31	87.06
ļ	2/11/2015		3.83	91.54
ļ	4/9/2015		4.97	90.40
•	7/1/2015		7.61	87.76
MW-3	9/13/2006	94.66	7.40	87.26
	12/20/2006		3.95	90.71
screened 5-15 feet	3/26/2007		3.41	91.25
	6/18/2007		5.77	88.89
-	8/19/2014		7.19	87.47
-	8/21/2014		7.30	87.36
-	4/9/2015		3.85	90.81
-				+
NAVA 4	7/1/2015	04.45	6.93	87.73
MW-4	9/13/2006	94.15	9.65	84.50
	12/20/2006		3.34	90.81
screened 4.9-14.9 feet	3/26/2007		3.91	90.24
-	6/18/2007		6.90	87.25
	8/19/2014		8.76	85.39
	8/21/2014		8.94	85.21
	4/9/2015		4.20	89.95
	7/1/2015		8.33	85.82
MW-5	9/13/2006	94.64	11.60	83.04
]	12/20/2006		3.97	90.67
screened 5.2-15.2 feet	3/26/2007		4.28	90.36
]	6/18/2007		6.10	88.54
<u> </u>	8/19/2014		10.48	84.16
	8/21/2014		10.71	83.93
	2/11/2015		3.82	90.82
[	4/9/2015		4.61	90.03
	7/1/2015		8.01	86.63
RW-1	9/13/2006	95.64	8.80	86.84
	12/20/2006		4.70	90.94
screened 4.7-14.7 feet	3/26/2007		5.03	90.61
ļ	6/18/2007		7.02	88.62
ļ	8/19/2014		8.40	87.24
ļ	8/21/2014		8.45	87.19
ŀ	2/11/2015		4.06	91.58
ŀ	4/9/2015		5.21	90.43
-	7/1/2015		7.79	87.85

# **SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**

# PNEC Former Bulk Petroleum Facility Shepard Way NW and Bromley Place NW Bainbridge Island, Kitsap County, Washington

all concentrations are in µg/l (micrograms per liter)

			TPH		i (microg	ВТЕ			
Sample Name	Sample Date	Gasoline-Range	Diesel-Range	Oil-Range	Benzene	Toluene	Ethylbeneze	Xylenes	MTBE
	9/13/2006	ND (<48)	160	150	ND (<0.5)	ND (<0.7)	ND (<0.7)	ND (<0.8)	ND (<0.5)
	12/20/2006	ND (<48)	ND (<76)	ND (<95)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
MW-1	3/26/2007	ND (<240)	ND (<75)	ND (<94)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
	6/18/2007	ND (<50)	ND (<76)	ND (<95)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	8/21/2014	ND (<100)	ND (<100)	ND (<250)	ND (<0.50)	ND (<5.0)	ND (<0.50)	ND (<1.5)	
	9/13/2006	300	2,700	530	ND (<0.5)	ND (<0.7)	2	ND (<0.8)	ND (<0.5)
	12/20/2006	ND (<48)	280	ND (<95)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	3/26/2007	ND (<48)	300	120	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
MW-2A	6/18/2007	ND (<50)	330	ND (<95)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
IVIVV-ZA	8/21/2014	ND (<100)	920	360	ND (<0.50)	ND (<5.0)	ND (<0.50)	ND (<1.5)	
	2/11/2015	-	330	ND <250	-	-		1	1
	4/9/2015	-	ND (<400)	ND (<400)				-	-
	7/1/2015		510	ND (<250)					
	9/13/2006	ND (<48)	88	97	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	12/20/2006	ND (<48)	88	ND (<95)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
MW-3	3/26/2007	ND (<48)	ND (<75)	ND (<94)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
	6/18/2007	ND (<50)	ND (<76)	ND (<95)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	8/21/2014	ND (<100)	ND (<100)	ND (<250)	ND (<0.50)	ND (<5.0)	ND (<0.50)	ND (<1.5)	

# **SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**

# PNEC Former Bulk Petroleum Facility Shepard Way NW and Bromley Place NW Bainbridge Island, Kitsap County, Washington

all concentrations are in µg/l (micrograms per liter)

			TPH			ВТЕ	ΞX		
Sample Name	Sample Date	Gasoline-Range	Diesel-Range	Oil-Range	Benzene	Toluene	Ethylbeneze	Xylenes	MTBE
	9/13/2006	ND (<48)	390	200	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	12/20/2006	ND (<48)	230	110	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
MW-4	3/26/2007	ND (<48)	150	ND (<95)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
	6/18/2007	ND (<50)	430	ND (<95)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	8/21/2014	ND (<100)	410	270	ND (<0.50)	ND (<5.0)	ND (<0.50)	ND (<1.5)	
	9/13/2006	61	840	230	ND (<0.5)	12	ND (<0.8)	ND (<0.8)	ND (<0.5)
	12/20/2006	200	2,000	390	ND (<0.5)	8	ND (<0.8)	ND (<0.8)	ND (<0.5)
	3/26/2007	250	1,300	300	ND (<0.5)	0.7	ND (<0.5)	ND (<0.5)	ND (<0.5)
MW-5	6/18/2007	130	1,100	120	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
10100-5	8/21/2014	ND (<100)	800	ND (<500)	ND (<0.50)	ND (<5.0)	ND (<0.50)	ND (<1.5)	
	2/11/2015		1200	560					
	4/9/2015		940	ND (<400)					
	7/1/2015		620	ND (<250)					

# SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

# PNEC Former Bulk Petroleum Facility Shepard Way NW and Bromley Place NW Bainbridge Island, Kitsap County, Washington

all concentrations are in µg/l (micrograms per liter)

			TPH		r (miorog	ВТ			
Sample Name	Sample Date	Gasoline-Range			Benzene	Toluene	Ethylbeneze	Xylenes	MTBE
	9/13/2006	ND (<48)	ND (<77)	ND (<96)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	12/20/2006	ND (<48)	180	ND (<96)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
	3/26/2007	ND (<48)	210	ND (<95)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
DW 4	6/18/2007	ND (<50)	280	ND (<96)	ND (<0.5)	ND (<0.7)	ND (<0.8)	ND (<0.8)	ND (<0.5)
RW-1	8/21/2014	ND (<100)	210	ND (<250)	ND (<0.50)	ND (<5.0)	ND (<0.50)	ND (<1.5)	
	2/11/2015		410	ND (<250)					
	4/9/2015		540	ND (<400)					
	7/1/2015		870	ND (<250)					
MTCA Method A Cleanup Level		1,000 <sup>1</sup>	500	500	5	1,000	700	1,000	20

Note: - Concentrations detected are in **BOLD** type.

- Shaded and **BOLD** concentrations are above MTCA cleanup levels.

TPH - Total petroleum hydrocarbons

MTBE - Methyl tert butyl ether
MTCA - Model Toxics Control Act

1 - No detectable benzene in ground water

-- - Not tested

ND - Not detected above laboratory reporting limit

# Appendix A

**Analytical Reports and Chain-of-Custody Documentation** 



(612)607-1700



April 22, 2015

Michael Noll Terracon 21905 64th Ave. W. Suite 100 Mountlake Terrace, WA 98043

RE: Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

#### Dear Michael Noll:

Enclosed are the analytical results for sample(s) received by the laboratory on April 11, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross

jennifer.gross@pacelabs.com

ENNI GROSS

**Project Manager** 

**Enclosures** 







#### **CERTIFICATIONS**

Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

**Minnesota Certification IDs** 

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01 Alaska Certification #: UST-078 Alaska Certification #MN00064 Alabama Certification #40770 Arizona Certification #: AZ-0014 Arkansas Certification #: 88-0680 California Certification #: 01155CA Colorado Certification #Pace Connecticut Certification #: PH-0256

EPA Region 8 Certification #: 8TMS-L Florida/NELAP Certification #: E87605

Guam Certification #:14-008r Georgia Certification #: 959 Georgia EPD #: Pace

Idaho Certification #: MN00064 Hawaii Certification #MN00064 Illinois Certification #: 200011 Indiana Certification#C-MN-01 Iowa Certification #: 368

Kansas Certification #: E-10167 Kentucky Dept of Envi. Protection - DW #90062 Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086 Louisiana DHH #: LA140001 Maine Certification #: 2013011 Maryland Certification #: 322

Michigan DEPH Certification #: 9909

Minnesota Certification #: 027-053-137 Mississippi Certification #: Pace Montana Certification #: MT0092

Nevada Certification #: MN\_00064 Nebraska Certification #: Pace New Jersey Certification #: MN-002 New York Certification #: 11647 North Carolina Certification #: 530

North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507 Oregon Certification #: MN200001 Oregon Certification #: MN300001 Pennsylvania Certification #: 68-00563

Puerto Rico Certification Saipan (CNMI) #:MP0003 South Carolina #:74003001 Texas Certification #: T104704192 Tennessee Certification #: 02818 Utah Certification #: MN000642013-4 Virginia DGS Certification #: 251 Virginia/VELAP Certification #: Pace Washington Certification #: C486 West Virginia Certification #: 382 West Virginia DHHR #:9952C Wisconsin Certification #: 999407970





#### **SAMPLE SUMMARY**

Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10302425001	MW-5	Water	04/09/15 10:10	04/11/15 10:20
10302425002	MW-2A	Water	04/09/15 10:45	04/11/15 10:20
10302425003	RW-1	Water	04/09/15 11:18	04/11/15 10:20



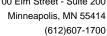


#### **SAMPLE ANALYTE COUNT**

Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10302425001	MW-5	NWTPH-Dx	MT	4	PASI-M
10302425002	MW-2A	NWTPH-Dx	MT	4	PASI-M
10302425003	RW-1	NWTPH-Dx	MT	4	PASI-M





#### **ANALYTICAL RESULTS**

Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

Date: 04/22/2015 05:16 PM

Sample: MW-5	Lab ID: 103	02425001	Collected: 04/09/1	5 10:10	Received: 04	/11/15 10:20 N	/latrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
NWTPH-Dx GCS LV	Analytical Metl	nod: NWTP	H-Dx Preparation Me	ethod: E	PA 3510			
Diesel Fuel Range	0.94	mg/L	0.40	1	04/14/15 10:09	04/16/15 13:11	68334-30-5	
Motor Oil Range Surrogates	ND	mg/L	0.40	1	04/14/15 10:09	04/16/15 13:11		
o-Terphenyl (S)	88	%.	50-150	1	04/14/15 10:09	04/16/15 13:11	84-15-1	
n-Triacontane (S)	94	%.	50-150	1	04/14/15 10:09	04/16/15 13:11	638-68-6	
Sample: MW-2A	Lab ID: 103	02425002	Collected: 04/09/1	5 10:45	Received: 04	/11/15 10:20 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
NWTPH-Dx GCS LV	Analytical Meth	nod: NWTP	H-Dx Preparation Me	ethod: E	PA 3510			
Diesel Fuel Range	ND	mg/L	0.40	1	04/14/15 10:09	04/16/15 13:54	68334-30-5	
Motor Oil Range Surrogates	ND	mg/L	0.40	1	04/14/15 10:09	04/16/15 13:54		
o-Terphenyl (S)	86	%.	50-150	1	04/14/15 10:09	04/16/15 13:54	84-15-1	
n-Triacontane (S)	94	%.	50-150	1	04/14/15 10:09	04/16/15 13:54	638-68-6	
Sample: RW-1	Lab ID: 103	02425003	Collected: 04/09/1	5 11:18	Received: 04	/11/15 10:20 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qua
NWTPH-Dx GCS LV	Analytical Metl	nod: NWTP	H-Dx Preparation Me	ethod: E	PA 3510			
Diesel Fuel Range	0.54	mg/L	0.40	1	04/14/15 10:09	04/16/15 14:16	68334-30-5	
Motor Oil Range Surrogates	ND	mg/L	0.40	1	04/14/15 10:09	04/16/15 14:16		
o-Terphenyl (S)	80	%.	50-150	1	04/14/15 10:09	04/16/15 14:16	84-15-1	
n-Triacontane (S)	88	%.	50-150	1	04/14/15 10:09	04/16/15 14:16	620 60 6	

(612)607-1700



#### **QUALITY CONTROL DATA**

Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

QC Batch: OEXT/28845 Analysis Method: NWTPH-Dx

QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS LV

Associated Lab Samples: 10302425001, 10302425002, 10302425003

METHOD BLANK: 1938646 Matrix: Water

Associated Lab Samples: 10302425001, 10302425002, 10302425003

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Diesel Fuel Range	mg/L	ND ND	0.40	04/16/15 12:06	
Motor Oil Range	mg/L	ND	0.40	04/16/15 12:06	
n-Triacontane (S)	%.	94	50-150	04/16/15 12:06	
o-Terphenyl (S)	%.	85	50-150	04/16/15 12:06	

LABORATORY CONTROL SAMPLE &	LCSD: 1938647		19	38648						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Diesel Fuel Range	mg/L	2	1.6	1.4	80	68	50-150	16	20	
Motor Oil Range	mg/L	2	1.7	1.5	86	74	50-150	15	20	
n-Triacontane (S)	%.				86	74	50-150			
o-Terphenyl (S)	%.				89	76	50-150			

SAMPLE DUPLICATE: 1938649

Date: 04/22/2015 05:16 PM

5	11.5	10302425001	Dup	555	Max	0 ""
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Diesel Fuel Range	mg/L	0.94	0.91	3	30	
Motor Oil Range	mg/L	ND	.34J		30	
n-Triacontane (S)	%.	94	89	6		
o-Terphenyl (S)	%.	88	82	7		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



#### **QUALIFIERS**

Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

#### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

#### **LABORATORIES**

PASI-M Pace Analytical Services - Minneapolis

#### **WORKORDER QUALIFIERS**

WO: 10302425

[1] The temperature blank was received outside of the required temperature range. Analysis was completed upon client approval.

#### **BATCH QUALIFIERS**

Batch: GCSV/15477

Date: 04/22/2015 05:16 PM

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.





#### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 81147093B PNEC CORP FORMER

Pace Project No.: 10302425

Date: 04/22/2015 05:16 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10302425001	MW-5	EPA 3510	OEXT/28845	NWTPH-Dx	GCSV/15477
10302425002	MW-2A	EPA 3510	OEXT/28845	NWTPH-Dx	GCSV/15477
10302425003	RW-1	EPA 3510	OEXT/28845	NWTPH-Dx	GCSV/15477



# **CHAIN-OF-CUSTODY / Analytical Request Document**

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Address 21905 69 4 Ave N St. 100 WA 98043  Email To: a   110   120
Company: Terracon  Report To: Monoli Residence Attention: Kasen Meyer  1858540  Address: 21905644 Ave. W. Se. W. Se. Do. W. Address 21905644 Ave. W. Se. Do. W. A. 1843 NPDES X. GROUND WATER TO DRINKING WATER TO
Address: 2190564th Ave, W. R. Copy To:  Nantake Terrace WA 98043  Company Name: Terrace REGULATORY AGENCY  Address 2190564th Ave W. St. 100 WA 9843  NO DESCRIPTION OF THE PROPERTY OF THE PRO
Mantlake Terrace WA 98043 GROUND WATER TO DRINKING WAT
17 Janoille Terracon. Corr   1870   1870   1884   1984   1
Phone: 771 72 Fax: Project Name: 7 1 1 1 1 Pace Project State Toland
Requested Due Date/TAT:  Project Number! 811470938  Requested Due Date/TAT:  Pace Profile #:  STATE: VA
Requested Analysis Filtered (Y/N)
Section D Required Client Information    Matrix Codes   MATRIX / CODE   MATRIX
SAMPLE ID  Oil  (A-Z, 0-9 / -)  Sample IDs MUST BE UNIQUE  Tissue  Other  Other
SAMPLE ID  Sample IDs MUST BE UNIQUE  Sample IDs
1 $MW-5$ $ W / B W / S 100    X    X     X                  $
3 RW-1 ± 11:18 X X X X X X X X X X X X X X X X X X X
5
8
9 10
11
12
ADDITIONAL COMMENTS RELINQUISHED BY / AFFILIATION DATE TIME ACCEPTED BY / AFFILIATION DATE TIME SAMPLE CONDITIONS
July 1 Terrowen 4/10/15 1020 Mass PACE 4/10/15 1020 129 4 N Y
TYF 40015 1530 18ac 411/15/1020 4.9 4 4 4
SAMPLER NAME AND SIGNATURE
ORIGINAL SAMPLER NAME AND SIGNATURE  ORIGINAL
DATE Signed (MM//DD/YY):   DATE Signed (MM//DD

# Pace Analytical\*

hold, incorrect preservative, out of temp, incorrect containers).

# Document Name:

# Sample Condition Upon Receipt Form

Document No.:

Document Revised: 23Feb2015

Page 1 of 1

Issuing Authority:

F-MN-L-213-rev.13

Pace Minnesota Quality Office

Sample Condition Upon Receipt  Client Name:		Project	** WO#: 10302425
Courier: Wisad Ex Dups		_	
Mred ExUP3		_Client	
☐Commercial ☐Pace ☐SpeeDee Tracking Number: \$779 \$333 €408	Other:	<del></del>	10302425
Tracking Number: 5774 5 3 3 3 2408		-	
Custody Seal on Cooler/Box Present?	Seals I	ntact?	Yes No Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubble Bags	☐None [	Other:	Temp Blank? ☑ Yes ☐ No
Thermometer  ☐ 888A9130516413 ☐ B88A91216750 ☐ Used: ☐ B88A01433100	1 ype of ice		et 🔲 Blue 🔲 None 🔲 Samples on ice, cooling process has begun
Cooler Temp Read (°C): Cooler Temp Col	rrected (°C):	9	Biological Tissue Frozen? Yes No No
Temp should be above freezing to 6°C Correction Fact	tor: +0:2	Dat	te and Initials of Person Examining Contents: $200 - 4111110$
USDA Regulated Soil ( M N/A, water sample) Did samples originate in a quarantine zone within the United	States Al AR A7	CA EL GA	ID, LA. Did samples originate from a foreign source (internationally,
MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)?		Yes	No including Hawaii and Puerto Rico)? ☐ Yes ☐ No
If Yes to either question, fill out a Reg	ulated Soil Check	list (F-MN	-Q-338) and include with SCUR/COC paperwork.
		· · · · · · · · · · · · · · · · · · ·	COMMENTS:
Chain of Custody Present?	☑Yes ☐No	□N/A	1.
Chain of Custody Filled Out?	☑Yes □No	□N/A	2.
Chain of Custody Relinquished?	ZYes □No	N/A	3.
Sampler Name and/or Signature on COC?	Yes ☑No	N/A	4.
Samples Arrived within Hold Time?	ØYes □ No	□N/A	5.
Short Hold Time Analysis (<72 hr)?	Yes ☑No	□N/A	6.
Rush Turn Around Time Requested?	∐Yes ⊠No	□N/A	7.
Sufficient Volume?	☑Yes □No	□N/A	8.
Correct Containers Used?	⊠Yes □No	□N/A	9.
-Pace Containers Used?	☑Yes ☐No	□N/A	
Containers Intact?	⊠Yes □No	□N/A	10.
Filtered Volume Received for Dissolved Tests?	□Yes □No	⊠N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	ĭZYes □No	□N/A	12.
-Includes Date/Time/ID/Analysis Matrix:	,		·
All containers needing acid/base preservation have been			13. ☐HNO₃ ☐H₂SO₄ ☐NaOH ☐HCI
checked? All containers needing preservation are found to be in	□Yes □No	<b>⊵</b> N/A	
compliance with EPA recommendation?			Sample #
(HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease,	□Yes □No	☑N/A	
(DRO/8015 (water) DOC	<b>∑</b> Yes □No	□N/A	Initial when Lot # of added completed: preservative:
Headspace in VOA Vials ( >6mm)?	☐Yes ☐No		14.
Trip Blank Present?	Yes □No		15.
Trip Blank Custody Seals Present?	□Yes □No		
Pace Trip Blank Lot # (if purchased):			·
CLIENT NOTIFICATION/RESOLUTION			Field Data Required? Yes No
Person Contacted: Michael Noll			Date/Time: 04/10/15
Comments/Resolution: The temperature blank arriv	ed over temp a	t 12.9, pe	r Michael proceed with analysis. The samples were kept in the
refrigerator overnight and placed on ice prior to the	Pace courier p	icking up	. JG 04/13/15
11: R.			
Project Manager Review:   Note: Whenever there is a discrepancy affecting North Carolina co	ompliance samples,	a copy of th	



July 8, 2015

Mr. Mike Noll Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043

Dear Mr. Noll,

On July 1st, 3 samples were received by our laboratory and assigned our laboratory project number EV15070004. The project was identified as your Former PNEC Bainbridge Island. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

**ALS Laboratory Group** 

Rick Bagan

**Laboratory Director** 



CLIENT: Terracon DATE: 7/8/2015

21905 - 64th Ave W, Suite 100 ALS JOB#: EV15070004 Mountlake Terrace, WA 98043 ALS SAMPLE#: EV15070004-01

CLIENT CONTACT: Mike Noll DATE RECEIVED: 07/01/2015

**CLIENT PROJECT:** Former PNEC Bainbridge Island **COLLECTION DATE:** 7/1/2015 11:10:00 AM

**CLIENT SAMPLE ID** MW-2A WDOE ACCREDITATION: C601

# SAMPLE DATA RESULTS

			REPORTING	DILUTION	UNITS	ANALYSIS AN	NALYSIS
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR		DATE	BY
TPH-Diesel Range	NWTPH-DX	510	130	1	UG/L	07/02/2015	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	07/02/2015	EBS

			A	ANALYSIS AN	IALYSIS
SURROGATE	METHOD	%REC		DATE	BY
C25	NWTPH-DX	92.6		07/02/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.



CLIENT: Terracon DATE: 7/8/2015

 21905 - 64th Ave W, Suite 100
 ALS JOB#:
 EV15070004

 Mountlake Terrace, WA 98043
 ALS SAMPLE#:
 EV15070004-02

 Mike Noll
 DATE RECEIVED:
 07/01/2015

CLIENT CONTACT: Mike Noll

CLIENT PROJECT: Former PNEC Bainbridge Island COLLECTION DATE: 7/1/2015 10:10:00 AM

CLIENT SAMPLE ID MW-5 WDOE ACCREDITATION: C601

#### SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AND DATE	NALYSIS BY
TPH-Diesel Range	NWTPH-DX	620	130	1	UG/L	07/02/2015	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	07/02/2015	EBS
						ANALYSIS AN	
SURROGATE	METHOD	%REC				DATE	BY
C25	NWTPH-DX	98.6				07/02/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.



CLIENT: Terracon DATE: 7/8/2015

 21905 - 64th Ave W, Suite 100
 ALS JOB#:
 EV15070004

 Mountlake Terrace, WA 98043
 ALS SAMPLE#:
 EV15070004-03

 Mike Noll
 DATE RECEIVED:
 07/01/2015

CLIENT CONTACT: Mike Noll

CLIENT PROJECT: Former PNEC Bainbridge Island COLLECTION DATE: 7/1/2015 11:40:00 AM

CLIENT SAMPLE ID RW-1 WDOE ACCREDITATION: C601

# SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS AI	NALYSIS BY
TPH-Diesel Range	NWTPH-DX	870	130	1	UG/L	07/02/2015	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	07/02/2015	EBS
SURROGATE	METHOD	%REC				ANALYSIS AI	NALYSIS BY
C25	NWTPH-DX	89.1				07/02/2015	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

Chromatogram indicates that it is likely that sample contains an unidentified diesel range product.



CLIENT: Terracon DATE: 7/8/2015

21905 - 64th Ave W, Suite 100 ALS SDG#: EV15070004

Mountlake Terrace, WA 98043 WDOE ACCREDITATION: C601

CLIENT CONTACT: Mike Noll

CLIENT PROJECT: Former PNEC Bainbridge Island

# LABORATORY BLANK RESULTS

# MB-070215W - Batch 94936 - Water by NWTPH-DX

			REPORTING	DILUTION		ANALYSIS A	NALYSIS	
ANALYTE	METHOD	RESULTS	LIMITS	FACTOR	UNITS	DATE	BY	
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	07/02/2015	EBS	
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	07/02/2015	EBS	

U - Analyte analyzed for but not detected at level above reporting limit.



CLIENT: Terracon DATE: 7/8/2015

21905 - 64th Ave W, Suite 100 ALS SDG#: EV15070004

Mountlake Terrace, WA 98043 WDOE ACCREDITATION: C601

CLIENT CONTACT: Mike Noll

CLIENT PROJECT: Former PNEC Bainbridge Island

# LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 94936 - Water by NWTPH-DX

					ANALTSIS	ANALTSIS	
SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	DATE	BY	
TPH-Diesel Range - BS	NWTPH-DX	89.8			07/02/2015	EBS	
TPH-Diesel Range - BSD	NWTPH-DX	98.7	9		07/02/2015	EBS	

APPROVED BY

ANAI VCIC

ANAI VOIC

Laboratory Director

# ALS

**ALS Environmental** 

8620 Holly Drive, Suite 100 Everett, WA 98208 Phone (425) 356-2600 Fax (425) 356-2626

# Chain Of Custody/ Laboratory Analysis Request

ALS Job#

(Laboratory Use Only)

EV15070004

(A	LS)			alsglobai.co								_						_		Date	7	- (-	15	Pag	e			_Of	1_	
PROJE	CT ID:	8914	70	93B	- Egym	brider Brite	Estand	AN	ALY	SIS	SIS REQUESTED									ОТІ	HER,	(Spe	ecify)	)						
REPOF COMP/ PROJE MANAG	RT TO • ANY: CT SER:	8714 Terry Mike	aun No	Con	sulte	vfs, st	-Nc.											Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM		TAL		Pest ☐ Herbs ☐								
ADDRE		21909	5	64th	Avenu	e Wes	L,Stelo										3270	EPA-82.	5			est 🗆								_
		MOUY	Hz	ke Te	VYzie,	WA 9	8043							, 8260			Semivolatile Organic Compounds by EPA 8270	4H) by	Uby EPA 8081/8082	Pri Pol										RECEIVED IN GOOD CONDITION?
PHONE	(42	c) 409.	-7/60	Z_FAX:								260	8260	Volatile Organic Compounds by EPA	EDB / EDC by EPA 8260 SIM (water)		iq spu	ons (P,	PA 80			Semi-Vol							ERS	.iQNC
P.O. #:	<u>용114</u>	7093	B F	E-MAIL:				-				EPA-8260	y EPA	spun	SIM	(soil)	nodw	rocarb	by E	RCRA-8									IAIN	Ö
P.O. #: 814 7093B E-MAIL:  INVOICE TO COMPANY: Tevracon  ATTENTION: Karm Mayors  ADDRESS: (Same 25 show)						-					tiles b	odwo	A 826(	A 826(	양	c Hydi	- 1		cify)	VOA							CONTAINERS	800		
ATTEN		Som	W 12	1 eyers	1			۱ و			A-802	PA-80;	d Vola	anic C	by EP	by EP	Orga	romati	sticide	)A-5	sk (Spe	[]							유	Z □
ADDRE	:55:	(0211	V 25	3 DAL	<del>)</del>		***************************************	NWTPH-HCID	XO-H	H-GX	BTEX by EPA-8021	MTBE by EPA-8021	Halogenated Volatiles by EPA 8260	le Org	EDC	EDB / EDC by EPA 8260 (soil)	olatile	/clic A	Pesticides	Metals-MTCA-5	Metals Other (Specify)	TCLP-Metals							NUMBER	EIVE
	SAM	PLE I.D.		DATE	TIME	TYPE	LAB#	MM	NWTPH-DX	NWTPH-GX	BTEX	MTBE	Halog	Volati	EDB/	EDB/	Semi	Polyc	PCB	Metal	Meta	TCLP							NON I	RC
1.	Mu	1-2A	7	7/1/15	1110	W	/		X																				ı	
	Mu	1-5				W	2		X																				1	
<ol> <li>3.</li> <li>4.</li> </ol>	RU	1-2A 1-5		7/1/15	1140	W	3		X																				1	
4.				, , ,																										
5.																														
6.																														
7.																														
8.																														
9.																														
10.																														
SPEC	AL INSTR	UCTIONS																												
1. Reli Red	ATURES ( nquished I eived By:_ nquished I	Shau	mpany,	Date, Tim	// Ki	Als T	, 7-1-15 11/15	14	/4 <u>)</u> //30	<i>30</i>			10 Standard	[	Met 5 & H	3	carb	rgan 2	ic A	naly SA ysis		REC		TED ecify:			ss Da HER:	ys*		
Rec	eived By:_									····				:	Standard		ا س					*Tur	maroun	d reque	st less	than sta	andard ı	may incur	 Rush C	 harges