

## GROUNDWATER MONITORING REPORT (JULY 2013)

**Site Name:** Capitol Plaza Hotel Property (Former Clarion Hotel Property)  
**Site Address:** 900 Capitol Way South Olympia, Washington 98501

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**Report Date:** July 30, 2013  
**Spectrum Project Number:** 5-101  
**Client:** Whidbey Island Bank (WIB)  
14807 Highway 99  
Lynnwood, Washington 98087  
**WIB Project Manager:** Ms. Cynthia Butterfield  
**Spectrum Project Manager:** Miguel Ortega, LG  
**Sampling Date:** July 16, 2013  
**Washington State Department of Ecology  
Voluntary Cleanup Program Project Number:** SW1266

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### BACKGROUND

Envitech, an environmental consulting firm prepared a underground storage tank (UST) Assessment Report for the Capitol Plaza Hotel property (Site; Figure 1). The November 4, 2008 report documented the removal of a 750-gallon capacity heating oil UST from the Site. Following the removal of approximately 70 tons of contaminated soil the excavation was backfilled with clean fill material and re-paved. The potential for groundwater contamination was indicated by the presence of diesel-range total petroleum hydrocarbons (TPH) in the analytical results for a grab groundwater sample collected from the subsurface adjacent to the UST removal excavation. The grab groundwater sample contained diesel-range TPH in a concentration which exceeded the Washington State Model Toxics Control Act (MTCA) Method A Groundwater Cleanup Levels.

To document the Site groundwater quality, a geologist from O'Malley & Associates supervised the installation of four groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) at the Site (April 19, 2013). The wells were installed to depths of 20 feet below ground surface (BGS) within the former UST removal excavation (source area – MW-2), up-gradient of the source area (MW-1), and down-gradient positions of the source area (MW-3 and MW-4; Figure 1).

The results of the initial Site groundwater testing (April 2013) indicated that no diesel-range TPH was present (non-detect) in the samples from the Site wells.

Following review of the initial Site groundwater sampling results, the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) requested that the groundwater within the well field of the Site be monitored for a period of four quarters. This report presents the results of the second quarterly Site well field sampling.

## **SCOPE OF WORK**

Water levels were recorded from the four site groundwater monitoring wells during this event (MW-1, MW-2, MW-3, and MW-4). Water levels were measured in each well using an electronic water-level meter with water depths measured relative to the top of well casing (TOC). The water level data is summarized in Table 1 of this report.

Spectrum collected groundwater samples from three site groundwater monitoring wells during this event (MW-1, MW-2, MW-3, and MW-4).

The volume of water in each well was calculated using the known well diameter, total well depth, and the depth to water. A peristaltic pump set at low flow, was used to purge the individual wells prior to sampling. Spectrum field personnel removed a minimum of three well volumes of water from each well prior to sample collection. Groundwater samples were collected by slowly lowering designated, disposable bailer into the well, thus minimizing the potential for volatilization of dissolved compounds (if present). The bailer was retrieved from the well and the water was slowly transferred into clean, laboratory-supplied containers. The samples were then placed in a pre-cooled (4°C), insulated cooler for transport to the laboratory. The samples were collected and delivered to the laboratory using standard chain-of-custody protocols. A copy of each chain-of-custody is included with the attached laboratory results.

## **Regulatory Requirements**

The purpose for the groundwater testing within the Site well field was to evaluate existing groundwater quality with the requirements of the Washington State Model Toxics Control Act (MTCA; 173-340 WAC) Method A Cleanup Levels for Groundwater (173-340-720 WAC).

## **Analytical Methods**

Groundwater samples were collected from wells MW-1, MW-2, MW-3, and MW-4 on July 16, 2013.

Groundwater samples were submitted to the ESN Northwest, Inc. (ESN), Bellevue, Washington environmental laboratory for analysis. The Site groundwater analytical protocol was as follows:

- Diesel-range TPH by Northwest Test Method NWTPH- Diesel Extended (Dx).

## **Groundwater Flow Direction**

Groundwater elevation measurements collected during the July sampling event suggest that direction of groundwater flow is generally toward the north - northeast (Figure 2 and Table 1). However, the gradient is very shallow.

### Analytical Results

Analytical results indicate that the groundwater samples collected from the four Site wells were free of detectable diesel-range TPH (Figure 2 and Table 2).

### Conclusions

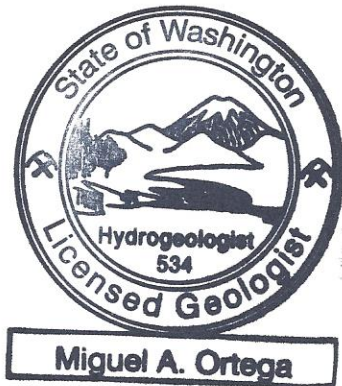
Groundwater up- and down-gradient of the former Site heating oil UST removal excavation is free of detectable concentrations of chemical compounds regulated by MTCA for diesel-range organics releases.

The results of the second groundwater sampling and testing indicate that no diesel-range TPH is present (non-detect) in the Site groundwater. Based on site observations, physical testing, and regulatory review the groundwater in the UST removal area of the Site is free of chemical contamination.

These results are identical to the initial Site groundwater testing results. Spectrum on behalf of WIB, will re-sample the Site well field in October 2013.

### Signature

This Groundwater Monitoring Report was prepared by the undersigned.



30 July 2013

Miguel A. Ortega, L.G.

Date

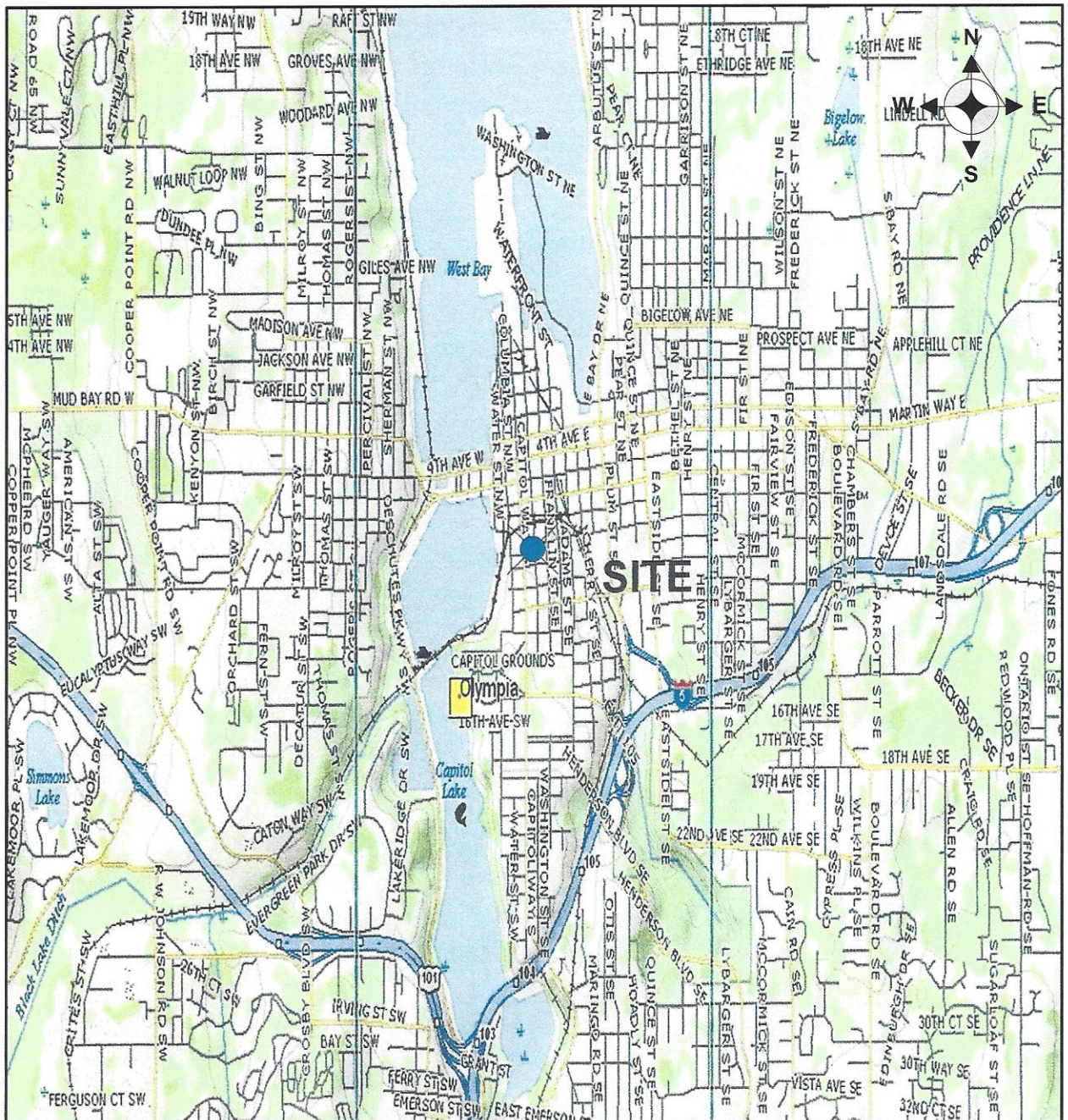
Washington Licensed Geologist (Hydrogeology Specialty); License #534.

### **Project Limitations**

The conclusions presented in report are professional opinions based upon our visual observations and physical testing. This report is intended exclusively for the purpose outline herein and at the site location and project indicated. This report is for the sole use of our client, Whidbey Island Bank. Opinions and conclusions presented herein apply to site conditions existing at the time of execution of our Quarterly Groundwater Monitoring Report and do not necessarily apply to future changes or other prior conditions at the site of which Spectrum is not aware and has not had the opportunity to evaluate. The scope of services performed in execution of this groundwater assessment may not be appropriate to satisfy the needs of other users, and any use or re-use of the document or the findings, conclusions, or recommendations presented is at the sole risk of the said user.

Spectrum's objective is to perform our work with care, exercising the customary thoroughness and competence of environmental consulting professionals in the relevant disciplines. Furthermore, we carried out our services in accordance with the standard for professional services by a consulting firm at the time those services were rendered. It is important to recognize that even the most comprehensive scope of services may fail to detect environmental liability on a particular site. Therefore, Spectrum cannot act as insurers and cannot "certify or underwrite" that a site is totally free of environmental liability. In addition, no expressed or implied representation or warranty is included or intended in our report except that our work was performed within the limits prescribed by our client, and with the customary thoroughness and competence of our profession.

**FIGURES**



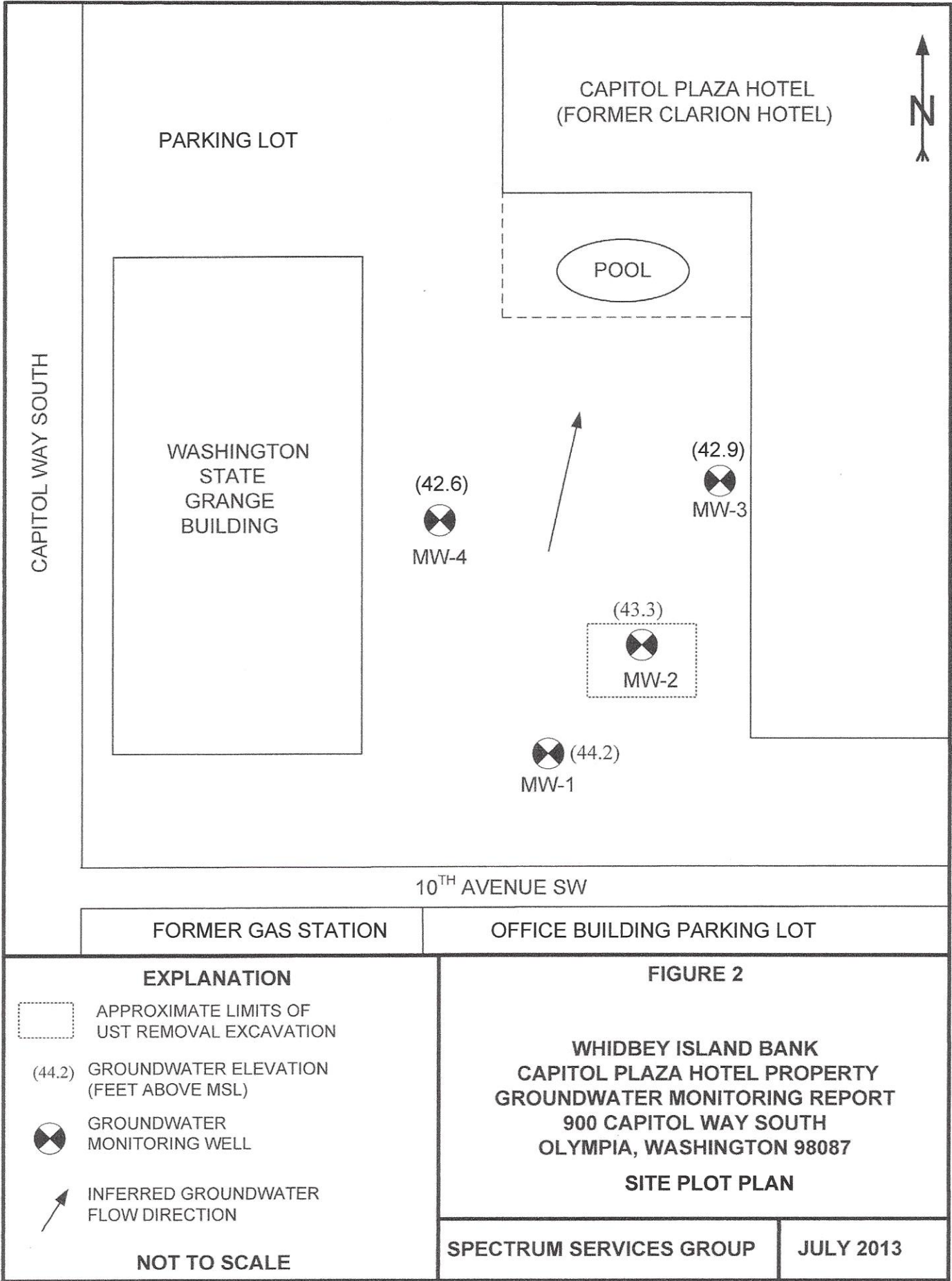
**FIGURE 1**  
**WHIDBEY ISLAND BANK**  
**CAPITOL PLAZA HOTEL PROPERTY**  
**GROUNDWATER MONITORING REPORT**  
**900 CAPITOL WAY SOUTH**  
**OLYMPIA, WASHINGTON 98087**

**SITE LOCATION MAP**

Reference: DeLorme Topo  
North America 1992

**SPECTRUM SERVICES GROUP, INC.**

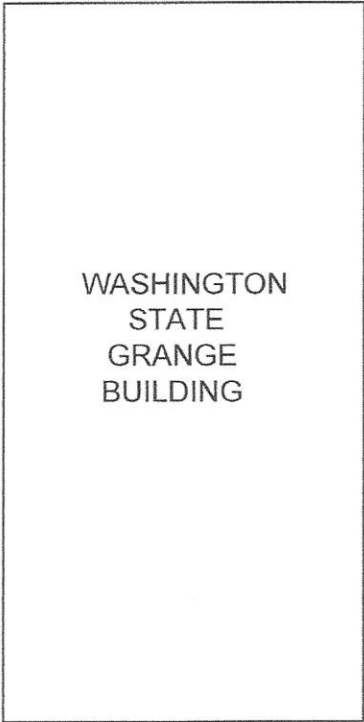
**JULY 2013**



CAPITOL WAY SOUTH

PARKING LOT

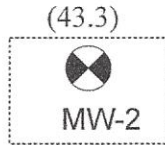
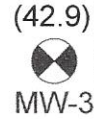
CAPITOL PLAZA HOTEL  
(FORMER CLARION HOTEL)



WASHINGTON  
STATE  
GRANGE  
BUILDING



POOL



10<sup>TH</sup> AVENUE SW

FORMER GAS STATION

OFFICE BUILDING PARKING LOT

**TABLES**



**TABLE 1: MONITORING WELL WATER LEVEL MEASUREMENTS**

<b>MONITORING WELL</b>	<b>TOP OF CASING ELEVATION (Feet Above MSL<sup>2</sup>)</b>	<b>STATIC WATER LEVEL (Feet Below TOC<sup>1</sup>)</b>	<b>GROUNDWATER ELEVATION</b>
MW1	55.5	10.2	44.2
MW2	55.1	10.3	43.3
MW3	53.6	10.4	42.9
MW4	55.1	10.8	42.6

**EXPLANATION**<sup>1</sup>Measured Below the Top of Well Casing in Feet<sup>2</sup>Feet Above Mean Sea Level

**TABLE 2: GROUNDWATER SAMPLE ANALYTICAL RESULTS**

<b>SAMPLE</b>	<b>SOURCE LOCATION</b>	<b>ANALYSIS RESULTS (<math>\mu\text{g/liter}</math>)<sup>1</sup></b>
MW-1-02	Monitoring Well MW-1, southwest of the Site former UST Removal Excavation (up-gradient).	NWTPH-Dx <sup>2</sup> - ND <sup>3</sup>
MW-2-02	Monitoring Well MW-2, in the center of the Site former UST Removal Excavation.	NWTPH-Dx - ND
MW-3-02	Monitoring Well MW-3, northeast the Site former UST Removal Excavation (down-gradient).	NWTPH-Dx - ND
MW-4-02	Monitoring Well MW-4, northwest of the Site former UST Removal Excavation (down-gradient)	NWTPH-Dx - ND
<sup>4</sup> Washington Model Toxics Control Act (MTCA) Method A Groundwater Cleanup Levels		Diesel- to Heavy Oil-Range TPH – 500 ppb

**EXPLANATION**

<sup>1</sup>Analytical results reported in micrograms per liter ( $\mu\text{g/liter}$ ) - parts per billion;

<sup>2</sup>Dx - Diesel to heavy oil-range total petroleum hydrocarbons by Test Method NWTPH-Dx;

<sup>3</sup>ND - Not Detected, below test method detection limits diesel-range TPH (250 parts per million [ppb]); and

<sup>4</sup>MTCA - Washington Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater.

**APPENDIX A: COPY OF ANALYTICAL REPORT**

July 19, 2013

Miguel Ortega  
Spectrum Service Group  
4205 148th Ave NE, Ste. 204  
Bellevue, WA 98007

Dear Mr. Ortega:

Please find enclosed the analytical data report for the Capitol Plaza Project in Olympia, Washington. Water samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended with Silica Gel Cleanup on July 17, 2013.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided 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,



Michael A. Korosec  
*President*

**ESN NORTHWEST CHEMISTRY LABORATORY**

Spectrum Services Group  
 CAPITOL PLAZA SITE PROJECT  
 Client Project #5-101  
 Olympia, Washington

ESN Northwest  
 1210 Eastside Street SE Suite 200  
 Olympia, WA 98501  
 (360) 459-4670 (360) 459-3432 Fax  
 lab@esnw.com

**Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx w/ Silica Gel Clean-Up**

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	7/16/2013	7/17/2013	95%	nd	nd
LCS	7/16/2013	7/17/2013	96%	92%	---
MW-1-02	7/16/2013	7/17/2013	104%	nd	nd
MW-2-02	7/16/2013	7/17/2013	91%	nd	nd
MW-3-02	7/16/2013	7/17/2013	114%	nd	nd
MW-4-02	7/16/2013	7/17/2013	100%	nd	nd
<b>Reporting Limits</b>				250	500

"---" Indicates not tested for component.

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

