

September 3, 2010

Mr. Norm Peck  
Washington State Department of Ecology  
Toxics Cleanup Program  
15 West Yakima Avenue, Suite 200  
Yakima, Washington 98902-3452

**RE: FINAL SUBSURFACE INVESTIGATION WORK PLAN ADDENDUM  
COLEMAN OIL WENATCHEE FACILITY  
3 CHEHALIS STREET EAST, WENATCHEE, WASHINGTON  
FARALLON PN: 1001-001**

Dear Mr. Peck:

Farallon Consulting, L.L.C. (Farallon) has prepared this Subsurface Investigation Work Plan Addendum (Addendum) on behalf of Coleman Oil Company (Coleman Oil) to present the scope of work for installation of four additional groundwater monitoring wells at the Coleman Oil Wenatchee facility at 3 Chehalis Street East in Wenatchee, Washington (herein referred to as the Site). The purpose of installing the additional groundwater monitoring wells is to refine the current understanding of groundwater flow direction and gradient at the Site, assess groundwater quality up- and down-gradient of Site operations, and characterize the lateral extent of benzene present in groundwater beneath the Site.

The objective of the subsurface investigation is to meet the substantive requirements established in Washington State Model Toxics Control Act Cleanup Regulation (MTCA), as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340) for a remedial action. The overall objective of the project is to develop and implement a technically feasible cleanup action to obtain a No Further Action (NFA) determination for the Site from the Washington State Department of Ecology (Ecology). The Site has been enrolled in the Ecology Voluntary Cleanup Program (VCP) and has been assigned VCP Identification No. CE0328 and Facility Site No. 83844381.

The purpose of the subsurface investigation activities is to characterize soil and groundwater conditions in the area of a gasoline spill that occurred at the Site on June 2, 2010, and to address the concerns of Ecology regarding the potential for migration of gasoline constituents present in the groundwater-bearing zone beneath the Site that may be in hydraulic communication with surface water in the adjacent Columbia River. Details of the approach to the initial subsurface investigation were presented in the letter regarding Subsurface Investigation Work Plan, Coleman Oil Wenatchee Facility, 3 Chehalis Street East, Wenatchee, Washington dated July 6, 2010, prepared by Farallon (Work Plan).

Implementation of the Work Plan was initiated the week of July 5, 2010. Three borings were advanced at the Site to characterize soil and groundwater quality relative to the gasoline release. The general stratigraphy encountered in borings at the Site was comprised of silt to a depth of 35 feet below ground surface (bgs) with sand, and sand and gravel layers present from 5 to 8 feet bgs and 13 to 15 feet bgs. Boulders were encountered sporadically from 1 to 40 feet bgs.

Two of the borings were completed as groundwater monitoring wells MW-1 and MW-2. A semi-confined groundwater-bearing zone was encountered at approximately 24 feet bgs in monitoring well MW-1 with a potentiometric surface at approximately 11 feet bgs. Monitoring well MW-1 was screened from 20 to 35 feet bgs, and monitoring well MW-2 was screened from 25 to 40 feet bgs. The general groundwater flow direction was estimated to be toward the Columbia River to the east.

Soil and groundwater samples were analyzed for the presence of total petroleum hydrocarbons as gasoline-range organics (GRO), and for benzene, toluene, ethylbenzene, and xylenes (BTEX). The analytical results identified the presence of benzene at concentrations above the MTCA Method A groundwater cleanup level in groundwater samples collected from monitoring wells MW-1 and MW-2. Additional groundwater monitoring wells are required to more precisely define the groundwater flow direction and gradient at the Site, and to characterize the lateral extent of benzene present in groundwater.

### **SCOPE OF WORK**

Based on the groundwater analytical results from the July 14, 2010 sampling event (Table 1) and a teleconference with Ecology on July 27, 2010, Farallon has developed this scope of work to address the data gaps identified following the initial phase of subsurface investigation. The scope of work includes sampling of soil in the dry well located at the facility and installation of four additional groundwater monitoring wells. Three monitoring wells will be installed on the Coleman Oil property and one will be installed on the east-adjacent property (Figure 1).

Monitoring wells MW-3 through MW-5 will be installed upon approval of this Work Plan Addendum. Monitoring well MW-6 will be installed at a later date due to facility upgrades scheduled to begin in late October 2010 proximate to the proposed well location. The upgrades include replacement of the single-walled steel subsurface fuel lines that run from the ASTs to the loading racks in the center of the main yard with double-walled fiberglass lines; installation of concrete containment areas at the truck and tank car loading racks; and removal of the dry well located east of the truck loading rack. Because these upgrades will disturb a large portion of the facility, installation of groundwater monitoring well MW-6 will be delayed until after the upgrades have been completed.

Well installation, surveying, water level elevation monitoring, sampling, analysis, and reporting will be conducted in accordance with the Work Plan. The monitoring well locations and dry well sampling procedures are described below.

## DRY WELL

A dry well of unknown age is present on the Coleman facility adjacent to and east of the truck fueling station (Figure 1). The dry well is scheduled to be decommissioned during facility upgrade activities during fall 2010. Because a dry well can act as a conduit for contaminants, a soil sample will be collected from within the dry well and submitted for laboratory analysis for BTEX by U.S. Environmental Protection Agency (EPA) Method 8021 and for GRO by Northwest Method NWTPH-Gx. If visual and olfactory monitoring during sample collection indicates signs of contamination, the location of monitoring well MW-4 may be moved to the north to characterize groundwater quality adjacent to the dry well. The final well location will depend on the calculated groundwater flow direction at the time of well installation. If GRO or BTEX above MTCA Method A cleanup levels is detected by laboratory analysis, removal of the dry well will be observed; if impacted soil is present, it will be addressed concurrent with facility upgrade activities.

## WELL LOCATIONS

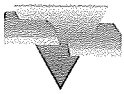
Groundwater monitoring well MW-3 will be installed on the western boundary of the Coleman Oil property proximate to prior boring location B-3 (Figure 1). The purpose of groundwater monitoring well MW-3 is to characterize groundwater quality up-gradient of Site operations and the June 2, 2010 gasoline spill, and to facilitate evaluation of groundwater flow direction and gradient at the Site.

Groundwater monitoring well MW-4 will be installed north of monitoring well MW-2. This location is down-gradient of the subsurface fuel distribution lines and cross-gradient of monitoring well MW-2 (Figure 2). The purpose of groundwater monitoring well MW-4 is to characterize groundwater conditions down-gradient of the subsurface fuel distribution lines and to delineate the extent of benzene in groundwater north of monitoring well MW-2.

Groundwater monitoring well MW-5 will be installed on the east side of South Worthen Street as close as practicable to the Columbia River (Figure 1). The purpose of monitoring well MW-5 is to characterize groundwater conditions down-gradient of the Coleman Oil facility adjacent to the Columbia River. Because this well is not located on Coleman Oil property, permission for access from the City of Wenatchee will be required prior to well installation.

Groundwater monitoring well MW-6 will be installed after facility upgrades have been completed. The current proposed location is north of the aboveground storage tank (AST) secondary containment and between two sets of subsurface fuel distribution lines extending from the ASTs to the fuel dispenser island. This location is proximate to prior boring location B-6 (Figure 1). The location may vary depending on the final configuration of the Site upgrades. The purpose of groundwater monitoring well MW-6 is to characterize groundwater conditions near the subsurface AST fuel distribution lines and up-gradient of monitoring well MW-2.

Based on the results of this proposed subsurface investigation, the location of monitoring well MW-6 may be adjusted to better delineate the lateral extent of benzene in groundwater, and additional wells may be required to complete characterization of the Site.



## GROUNDWATER MONITORING WELL INSTALLATION, SAMPLING, AND ANALYSIS

Well installation will be conducted in accordance with the Work Plan. As specified in the Work Plan, soil samples will be collected at 5-foot intervals to classify the soils and to monitor for organic vapors and visual and olfactory signs of contamination. If signs of contamination are noted, a soil sample will be collected and submitted for laboratory analysis for BTEX by U.S. Environmental Protection Agency (EPA) Method 8021 and for GRO by Northwest Method NWTPH-Gx. If there is no indication of contamination, a sample will be collected from above the groundwater-bearing zone and submitted for analysis.

The monitoring wells will be advanced to a maximum depth of 40 bgs using an air rotary drill rig and constructed with 10 to 15 feet of well screen, similar to that for monitoring wells MW-1 and MW-2. The final monitoring well depth and well screen interval will be determined in the field based on the soil and groundwater conditions encountered. Each well screen will be placed across the groundwater-bearing zone but below the semi-confining silt layer present at approximately 15 to 20 feet bgs. The well will be sealed with bentonite and concrete above the well screen to prevent groundwater from migrating above the semi-confining layer. Installation of monitoring well MW-6 will require use of a limited-access air rotary rig due to the proximity of overhead electrical lines on the east side of South Worthen Street.

The newly installed wells will be developed as described in the Work Plan. Groundwater monitoring and sampling will be conducted at monitoring wells MW-1 through MW-5 no sooner than 48 hours after development of the newly installed wells. Groundwater sampling will be conducted using a peristaltic pump or bladder pump. Although the groundwater-bearing zone is present at approximately 24 feet bgs, the potentiometric surface is at approximately 11 feet bgs and should allow the use of a peristaltic pump.

The groundwater samples collected will be submitted for laboratory analysis for BTEX by EPA Method 8021B and for GRO by Northwest Method NWTPH-Gx. Laboratory analyses will be conducted on a standard laboratory turnaround time of 10 days.

Investigation-derived waste, including soil cuttings, well development purge water, and waste water generated during the subsurface investigation activities, will be temporarily contained in 55-gallon steel drums with secure lids. The laboratory analytical results from the soil and groundwater sampling will be used to ensure that waste can be profiled under the disposal facility profiles developed during the initial phase of investigation. At the direction of Coleman Oil, the waste will be transported and disposed of at an appropriate transport, storage, and disposal facility in accordance with Washington State Dangerous Waste Regulations (WAC 173-303) and Washington State Solid Waste Handling Standards (WAC 173-350).

Following well installation, sampling, and receipt of analytical data, a Subsurface Investigation Report presenting the results of the two phases of investigation will be prepared and provided to Ecology in draft format for review and comment prior to finalization. Additional characterization and/or remediation will be addressed in a separate phase under the VCP, as appropriate.

Farallon proposes to initiate the well installation and sampling effort described herein in September 2010, pending Ecology review and approval of this Addendum and receipt of authorization for access to the adjacent property east of Worthen Street. Please contact either of the undersigned at (425) 295-0800 if you have questions or require additional information regarding this Addendum.

Sincerely,

**Farallon Consulting, L.L.C.**



Stacy Patterson  
Senior Environmental Scientist



J. Riley Conkin, L.G., L.H.G.  
Principal Geologist

Attachments: Figure 1, *Site Plan*  
Table 1, *Groundwater Analytical Results*

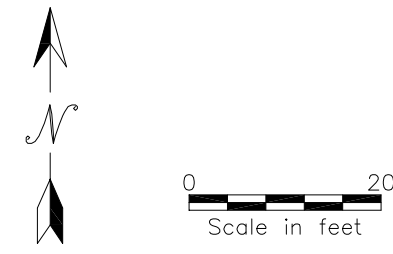
cc: Jim Cach, Coleman Oil Company  
Tom Graff, Coleman Oil Company


SDP/JRC:bjj

**LEGEND**

- X-X-X-X-X- CHAINLINK FENCE
- - - - - UNDERGROUND FUEL LINE
- GAS - - - - - UNDERGROUND NATURAL GAS LINE
- T - - - - - UNDERGROUND COMMUNICATION LINE
- E - E - E - UNDERGROUND ELECTRICAL LINE
- SS - - - - - UNDERGROUND SANITARY SEWER LINE
- V - - - - - UNDERGROUND WATER LINE
- DHP - - - - - OVERHEAD POWER LINE
- [Shaded Area] EXCAVATION AREA JUNE 2010
- MW-1 [Symbol] MONITORING WELL
- MW-6 [Symbol] PROPOSED MONITORING WELL
- FB-3 [Symbol] SOIL BORINGS
- [Symbol] POWER POLE
- [Symbol] SANITARY SEWER MANHOLE
- [Symbol] FIRE HYDRANT
- [Symbol] TELEPHONE RISER BOX
- [Symbol] WATER METER
- [Symbol] CATCH BASIN
- [Symbol] APPROX. 10' TALL ARBORVITAE
- [Symbol] WATER VALVE

TOPOGRAPHIC SURVEY PROVIDED BY: MUNSON ENGINEERS, INC., DATE 7/16/2010





**FARALLON CONSULTING**  
975 5th Avenue Northwest  
Issaquah, WA 98027

**FIGURE 1**

SITE PLAN  
COLEMAN OIL WENATCHEE  
WENATCHEE, WASHINGTON

FARALLON PN:1001-001

Drawn By: SP
Checked By: DEW
Date: 9/3/10
Disk Reference: 1001001

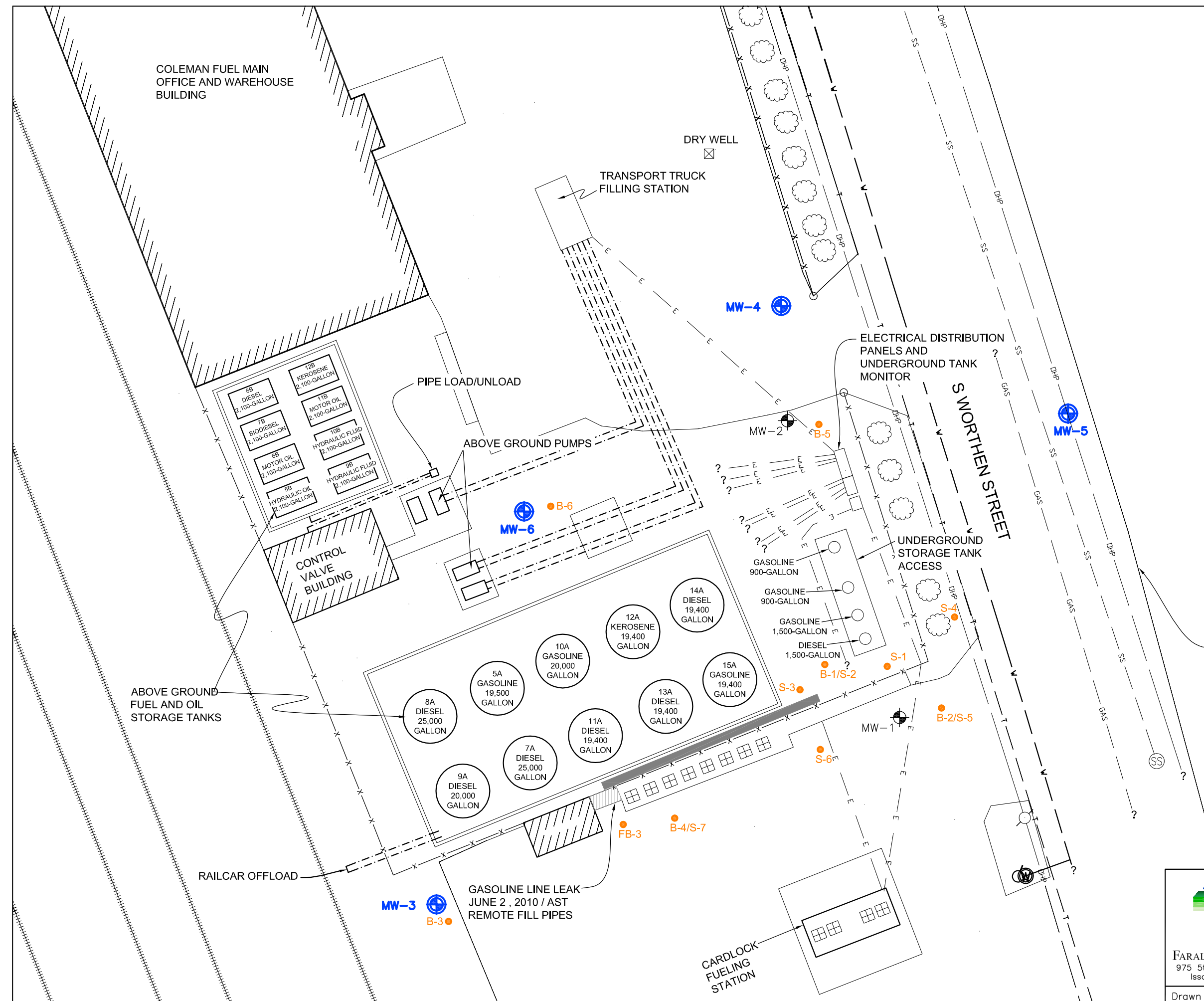


Table 1  
 Groundwater Analytical Results  
 Coleman Oil Wenatchee Facility  
 Wenatchee, Washington  
 Farallon PN :1001-001

Monitoring Well	Sample Identification	Sample Date	Sampled By	Groundwater Analytical Results (micrograms per liter)				
				GRO <sup>1</sup>	Benzene <sup>2</sup>	Toluene <sup>2</sup>	Ethylbenzene <sup>2</sup>	Xylenes <sup>2</sup>
MW-1	MW1-07142010	7/14/2010	Farallon	<100	37	<1.0	<1.0	<1.0
MW-2	MW2-07142010	7/14/2010	Farallon	<400	220	<4.0	<4.0	<4.0
<b>MTCA Method A Cleanup Levels for Groundwater<sup>4</sup></b>				<b>800</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>

NOTES:

Results in **bold** denote concentrations above applicable cleanup levels.

< denotes analyte not detected at or above the reporting limit listed.

<sup>1</sup>Analyzed by Northwest Method NWTPH-Gx.

<sup>2</sup>Analyzed by U.S. Environmental Protection Agency Method 8021B.

<sup>4</sup>Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Groundwater Cleanup Levels, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

Farallon = Farallon Consulting, L.L.C.

GRO = total petroleum hydrocarbons as gasoline-range organics