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CLEANUP ACTION PROGRESS REPORT

MAY 2009

WHIDBEY MARINE & AUTO SUPPLY FACILITY
1689 MAIN STREET
FREELAND, WASHINGTON

Submitted by:
Farallon Consulting, L.L.C.
1201 Cornwall Avenue, Suite 105
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Farallon PN: 454-001

For:
Whidbey Marine & Auto Supply
1689 Main Street
Freeland, Washington

July 28, 2009

Prepared by:

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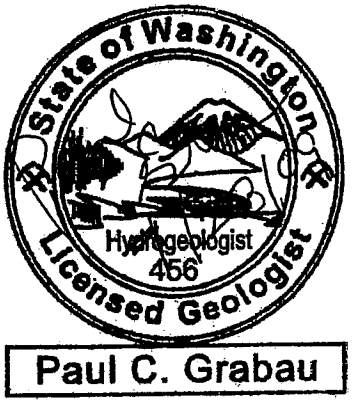

Reviewed by:

Gerald J. Portele
Principal

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1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this progress report to document the status of the cleanup action related to the release of gasoline from the underground storage tank (UST) system at the Whidbey Marine & Auto Supply facility located at 1689 Main Street in Freeland, Washington (herein referred to as the Facility) (Figure 1). The cleanup action at the Facility is being conducted under the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program and in accordance with the provisions of the Washington State Model Toxics Control Act Cleanup Regulation (MTCA), as established in Chapter 173-340 of the Washington Administrative Code. The Facility has been assigned Toxics Cleanup Program Identification Number NW1529 by Ecology.

This progress report presents the results of the additional groundwater monitoring well installation activities conducted at the Facility in April 2009, the results of the groundwater monitoring event completed in May 2009, and a discussion of the overall progress of the cleanup action. The report also details the operation and maintenance (O&M) activities conducted from November 19, 2008 through May 12, 2009 for the soil vapor extraction (SVE) system previously installed at the Facility. The SVE system currently consists of a regenerative blower and catalytic oxidizer (Catox) connected via subsurface piping to three SVE wells designated SVE-1, SVE-2S, and SVE-2D, and one dual purpose SVE/monitoring well designated MW-1 (Figure 2).

The SVE system was installed to remove gasoline-range petroleum hydrocarbons in vadose zone soil identified during soil and groundwater investigations conducted at the Facility in 2005 and 2006.

The progress report is organized as follows:

- Section 2 describes the groundwater monitoring well installation and soil sampling methods for the April 2009 field activities.
- Section 3 presents the groundwater sampling methods and analytical results for the May 2009 groundwater monitoring event at the Facility.
- Section 4 details the O&M activities conducted on the SVE system from November 19, 2008 through May 12, 2009.
- Section 5 provides Farallon's summary and conclusions pertaining to recent investigation, monitoring, and remediation activities conducted at the Facility.

2.0 GROUNDWATER MONITORING WELL INSTALLATION

Additional groundwater monitoring wells MW-9 through MW-12 were installed at the Facility in mid-April 2009 at the locations shown on Figure 2. A description of the field activities and results of the soil sampling completed during the installation of the groundwater monitoring wells are presented below.

2.1 FIELD METHODS

The well installation activities were conducted at the Facility from April 13 through 15, 2009. Cascade Drilling, Inc. of Woodinville, Washington performed the drilling activities at the Facility using a hollow-stem auger drilling rig. Prior to commencement of drilling, a public utility locate was completed and Applied Professional Services, Inc. of North Bend, Washington conducted a private utility location survey at the Facility. The field activities were conducted under the supervision of a Washington State-licensed geologist.

The upper portions of the borings for the wells were sampled every 5 feet from approximately 10 feet below ground surface (bgs) to 55 feet bgs using an 18-inch-long split spoon sampler. Over the depth interval ranging from about 55 feet bgs to between 70 and 80 feet bgs, the borings were sampled continuously to better characterize conditions in the interbedded silt zone encountered in previous borings advanced at the Facility. Below the interbedded silt zone, the sampling frequency was every 5 feet to the total depth of the borings which were each completed at 110 feet bgs. The sampler was decontaminated after sampling at each interval was completed. Each soil sample was described in accordance with the Unified Soil Classification System as defined in ASTM Standard D2488-06, *Standard Practice for Description and Identification of Soils,* and evidence of potential contamination such as unusual odor, discoloration, or sheen was noted. The soil samples were also screened in the field using a photoionization detector (PID) to detect the presence of volatile organic vapors. The boring logs containing the soil descriptions, field observations, and PID readings are provided in Appendix A.

Select soil samples retained for potential laboratory analysis were transferred to laboratory-prepared containers. Care was taken to not handle the seal or the inside cap of the container when placing the sample into the containers. Soil sample containers were labeled using a unique sample number and placed immediately on ice in a cooler. The soil samples were submitted for laboratory analysis to CCI Analytical Laboratories of Everett, Washington under standard chain-of-custody protocols. The soil samples were selected for chemical analysis based on field observations of elevated PID readings at specific depth intervals. In the absence of elevated PID readings, soil samples displaying other evidence of potential contamination such as unusual odor, discoloration, or sheen were submitted for analysis. Two to five soil samples from each of the borings were submitted for laboratory analysis.

2.1.1 Analytical Methods

The selected soil samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline-range organics (GRO) by Northwest Method NWTPH-Gx and for benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method

8021B. The soil samples for these analyses were collected following EPA Method 5035A, in accordance with Ecology guidance, to reduce the potential loss of volatile compounds during sample collection. Two soil samples collected from the boring for monitoring well MW-12 were also analyzed for the presence of TPH as diesel-range organics (DRO) and TPH as oil-range organics (ORO) by Northwest Method NWTPH-Dx.

2.1.2 Well Development

Following installation of the monitoring wells, the wells were developed to remove fine-grained materials from the screen and sand pack. Due to the small amount of groundwater present in the wells following installation, the wells were developed using a stainless steel bailer. To the extent possible, a minimum of the equivalent of three submerged well casing volumes of groundwater was removed from each of the wells during well development.

2.1.3 Waste Handling

The soil cuttings, decontamination water, and development water generated during the monitoring well and remediation well installation were stored at the Facility in 55-gallon drums pending disposal. Farallon is currently coordinating the transport and disposal of the drummed materials as directed by the property owner.

2.2 SUBSURFACE CONDITIONS

The geologic conditions encountered in the boring for monitoring well MW-9 were consistent with conditions observed in the previous subsurface investigations at the Facility. Soil generally consisted of fine- to coarse-grained, poorly graded sand with varying amounts of silt (trace to 10 percent silt), and poorly graded gravel with sand to a depth of about 55 feet bgs where a 4.5 foot thick zone of sand with silt and silty sand was encountered. The soil did not appear to be saturated above the sandy silt zone at the time of drilling as it was in previous borings at similar depths at the Facility. A gravelly zone was encountered beneath the silty sand zone to a depth of approximately 66.5 feet bgs, where a 1 foot thick silt layer was found. Poorly graded sand was encountered from about 67.5 feet bgs to the total depth of the monitoring well MW-9 boring at 110 feet bgs. Saturated conditions were encountered at about 104 feet bgs in the boring. Petroleum-like odors were first encountered in soil samples from the boring at 62 feet bgs and field indications of petroleum hydrocarbon contamination were noted until about 90 feet bgs and then again at 104 feet bgs. The highest PID readings were from soil samples collected over the depth interval from about 66.5 feet bgs to around 70 feet bgs with a maximum reading of 1,528 parts per million[1] (ppm) recorded from the sample collected at 68 feet bgs.

The boring for monitoring well MW-10, located at the northwest corner of the intersection of South Harbor Avenue and Main Street, encountered poorly graded sands above and below a silt and sand with silt zone at 60 to 66 feet bgs. Saturated conditions were not encountered above the silt and sand with silt zone but were identified at about 104 feet bgs. No petroleum-like odors were encountered in any of the soil samples collected during the installation of monitoring well MW-10 and PID readings were generally less than the instrument detection limit.

[1] Parts per million total organic vapors in isobutylene equivalents using a 10.6 electron volt lamp.

The boring for monitoring well MW-11 was completed in the area between monitoring wells MW-9 and MW-10. Poorly graded sands with occasional poorly graded gravel were encountered throughout the boring with no significant silt or silty sand zone found. Saturated conditions were encountered at about 104 feet bgs in the boring. The only petroleum-like odors noted in the soil samples from the boring for monitoring well MW-11 were from the deepest sample which was collected at 104 feet bgs. The PID reading for the 104 feet bgs sample was 690 ppm. PID readings for the other soil samples collected from the boring were all less than 2 ppm.

The boring for monitoring well MW-12 was located at the southwest corner of the intersection of South Harbor Avenue and Main Street. Poorly graded sands were encountered throughout the boring with silt and sandy silt beds found at about 44.5 to 45.5 feet bgs and 65 to 69 feet bgs. Saturated conditions were encountered at about 104 feet bgs in the boring. Petroleum-like odors were first encountered in soil samples from the boring at 44 feet bgs, and were noted to be present throughout the remaining total depth of the boring at 104 feet bgs. The highest PID reading of 1,455 ppm was recorded for a soil sample collected from 64.5 feet bgs. PID readings in excess of 500 ppm were noted in samples collected from 84 to 104 feet bgs.

2.3 MONITORING WELL CONSTRUCTION

The monitoring wells were constructed using 2-inch diameter schedule 40 polyvinyl chloride 0.010-inch slotted well screen that was flush threaded to 2-inch diameter blank casing. Details of the well installation are provided on the boring and well installation logs provided in Appendix A. The screened intervals in all four wells extend from 100 to 110 feet bgs. The wells were all completed using traffic-rated flush-mount well monuments.

2.4 SOIL ANALYTICAL RESULTS

The analytical results for the soil samples collected from the borings for the monitoring wells installed April 13 through 15, 2009 are presented below. A summary of the results is shown on Table 1 along with the corresponding MTCA Method A cleanup levels for soil. The laboratory analytical report is provided as Appendix B.

Soil samples were submitted for laboratory analysis from the boring for monitoring well MW-9 from depths of 62.5, 68, and 85 feet bgs. GRO was detected in the soil sample collected from 68 feet bgs at a concentration of 2,600 milligrams per kilogram (mg/kg), which exceeds the MTCA Method A cleanup level of 30 mg/kg. BTEX constituents were also detected in the soil sample from 68 feet bgs at concentrations above their respective MTCA Method A cleanup levels. GRO or BTEX constituents were not detected above the MTCA Method A cleanup levels for soil in the other soil samples analyzed from the soil boring for monitoring well MW-9.

Soil samples were submitted for chemical analysis from the boring for monitoring well MW-10 from depths of 58 and 99 feet bgs. GRO or BTEX constituents were either not detected above their respective MTCA Method A cleanup levels for soil or were not detected at or above the laboratory reporting limits in the soil samples analyzed from the boring for monitoring well MW-10.

Soil samples were submitted for chemical analysis from the boring for monitoring well MW-11 from depths of 68 and 99 feet bgs. GRO was not detected above the MTCA Method A cleanup level for soil in the soil samples analyzed from the boring for monitoring well MW-11. Benzene was the only BTEX constituent detected in either soil samples submitted for chemical analysis from the boring for monitoring well MW-11 at a concentration above its MTCA Method A cleanup level. The detected benzene concentration of 0.06 mg/kg in the soil sample collected from 99 feet bgs, exceeded the MTCA Method A cleanup level of 0.03 mg/kg.

Soil samples were submitted for laboratory analysis from the boring for monitoring well MW-12 from depths of 45, 56, 65, 85, and 99 feet bgs. GRO was detected at concentrations above the MTCA Method A cleanup level in the soil samples from 45, 65, and 99 feet bgs, with the highest concentration of 2,900 mg/kg detected in the sample from 99 feet bgs. The laboratory reporting limit for the GRO analyses for the sample collected from 85 feet bgs was elevated to above the MTCA Method A cleanup level due to overlap from what the laboratory described as semivolatile range product. The laboratory limits for benzene were elevated to above the MTCA Method A cleanup level in the soil samples collected from 65, 85, and 99 feet bgs. Ethylbenzene and xylenes were detected above their respective MTCA Method A cleanup levels in the samples collected from depths of 65 and 99 feet bgs in the boring for monitoring well MW-12. Farallon also requested that DRO and ORO analyses be conducted on the soil samples collected from 45 and 85 feet bgs at this location based on the laboratory notation regarding the semivolatile range overlap for the 85 feet bgs sample. The DRO result of 1,300 mg/kg for the soil sample collected at 85 feet bgs was below the MTCA Method A cleanup level of 2,000 mg/kg. DRO was not detected above the laboratory reporting limit in the soil sample collected from 45 feet bgs and ORO was not detected in either of the 45 or 85 foot bgs samples above the laboratory reporting limits.

2.5 SURVEYING

Following completion of the well installation activities, the four new monitoring wells were surveyed by licensed surveyors, Thatcher & Morrison, Inc. of Freeland, Washington. The top of casing elevations for the new and existing wells are provided on Table 2.

3.0 GROUNDWATER MONITORING

The groundwater monitoring conducted at the Facility on May 14 and 15, 2009 included obtaining depth to groundwater measurements and collecting groundwater samples from monitoring wells MW-1 through MW-4 and MW-6 through MW-12 (Figure 2). Monitoring well MW-5 was dry at the time of the May 2009 monitoring event and has been since installation. The May 2009 groundwater monitoring and sampling event was the tenth event conducted following start-up of the SVE system in September 2006. Details of the field activities and the results for the May 2009 monitoring and sampling event are presented below.

3.1 FIELD METHODS

Prior to sampling, Farallon measured the depth to groundwater in each monitoring well using an electronic water-level indicator. The monitoring wells were opened and the water levels were allowed to equilibrate before measurement. The groundwater level in each monitoring well was measured to the surveyed reference point on the top of the well casing to derive the groundwater elevation at each location.

Groundwater was purged from each monitoring well at a flow rate of approximately 200 milliliters per minute using a bladder pump, where feasible. Field measurements were collected for pH, temperature, specific conductivity, dissolved oxygen, and oxidation/reduction potential during groundwater purging using a YSI Model 600XL water quality analyzer equipped with a flow-through cell. Groundwater samples were collected after the temperature, conductivity, and pH parameters stabilized. Stabilization was determined as a relative percent difference of less than 3 percent for temperature and conductivity, and a change of $\pm$0.1 pH unit between readings for three consecutive measurements. The samples from monitoring wells MW-1 through MW-4 and MW-8 through MW-12 were collected by pumping groundwater directly from each well through dedicated polyethylene tubing into laboratory-prepared containers. There was not a sufficient volume of groundwater in monitoring wells MW-6 and MW-7 at the time of sampling to utilize the bladder pump so disposable bailers were used to purge and collect the groundwater samples from these wells. A minimum of three submerged casing volumes of water was purged from monitoring wells MW-06 and MW-7 using disposable bailers prior to sample collection. Groundwater samples were collected from monitoring wells MW-6 and MW-7 by decanting the groundwater directly for the disposable bailers into laboratory-prepared containers. The samples were labeled, placed on ice, and transported to CCI Analytical Laboratories, Inc. in Everett, Washington for analysis following chain-of-custody protocols.

3.2 ANALYTICAL METHODS

The groundwater samples were analyzed for GRO by Northwest Method NWTPH-Gx and for BTEX by EPA Method 8021B. Groundwater samples collected from monitoring wells MW-4 and MW-9 through MW-12 were also analyzed for DRO and ORO by Northwest Method NWTPH-Dx.

3.3 GROUNDWATER MONITORING RESULTS

Table 2 presents a summary of the groundwater elevation data for the Facility. Table 3 presents the groundwater analytical results for GRO and BTEX for May 2009 and previous quarterly monitoring events. Table 4 presents the groundwater analytical results for DRO and ORO for the May 2009 monitoring event. A comparison to the corresponding MTCA Method A groundwater cleanup levels is also provided on Tables 3 and 4, and a copy of the laboratory analytical report for the May 2009 groundwater monitoring event is provided in Appendix B.

3.3.1 Groundwater Elevation

Groundwater elevations measured at the Facility on May 12, 2009 in the perched groundwater zone ranged from 65.16 feet above mean sea level (msl) in monitoring well MW-1 to 56.22 feet above msl in monitoring well MW-6. Groundwater elevations measured at the Facility on May 12, 2009 in the sea level aquifer ranged from 11.43 feet above msl in monitoring well MW-10 to 10.27 feet above msl in monitoring well MW-12 (Table 2). Monitoring well MW-5 has been dry each time it has been monitored since the time it was installed in February 2007. Groundwater elevation contours for the perched groundwater zone and seal level aquifer based on the water levels measured on May 12, 2009 are shown on Figures 3 and 4. As shown on Figure 3, the general groundwater flow direction in the perched groundwater zone at the Facility is to the west, with a hydraulic gradient of approximately 0.02 foot per foot in the eastern area of the Facility and a considerably steeper gradient of 0.14 foot per foot to the west (Figure 3). The general groundwater flow direction in the sea level aquifer in the vicinity of the Facility was to the south based on the May 12, 2009 measurements (Figure 4).

3.3.2 Analytical Results

The analytical results identified the presence of GRO and various BTEX constituents at concentrations above their respective MTCA Method A cleanup levels in the groundwater samples collected during the May 2009 monitoring event as follows:

- Monitoring well MW-2 – GRO at 4,300 micrograms per liter (µg/l) and xylenes at 1,100 µg/l;
- Monitoring well MW-4 – GRO at 83,000 µg/l, toluene at 30,000 µg/l, ethylbenzene at 1,100 µg/l, and xylenes at 6,600 µg/l;
- Monitoring well MW-6 – GRO at 17,000 µg/l, benzene at 29 µg/l, toluene at 3,200 µg/l, and xylenes at 3,100 µg/l;
- Monitoring well MW-7 – GRO at 13,000 µg/l, benzene at 2,500 µg/l, toluene at 3,700 µg/l, and xylenes at 1,700 µg/l;
- Monitoring well MW-8 – GRO at 60,000 µg/l, toluene at 9,000 µg/l, ethylbenzene at 1,800 µg/l, and xylenes at 9,500 µg/l;

- The duplicate quality assurance/quality control (QA/QC) sample from monitoring well MW-8 – GRO at 57,000 µg/l, toluene at 8,900 µg/l, ethylbenzene at 1,700 µg/l, and xylenes at 9,400 µg/l;

- Monitoring well MW-9 – GRO at 94,000 µg/l, benzene at 18,000 µg/l, toluene at 32,000 µg/l, ethylbenzene at 1,500 µg/l, and xylenes at 7,600 µg/l;

- Monitoring well MW-11 – GRO at 2,300 µg/l and benzene at 500 µg/l; and

- Monitoring well MW-12 – GRO at 55,000 µg/l, benzene at 200 µg/l, toluene at 8,900 µg/l, ethylbenzene at 1,700 µg/l, and xylenes at 9,700 µg/l.

In addition, the laboratory reporting limits for benzene were elevated to above the MTCA Method A cleanup levels for the groundwater samples collected from monitoring wells MW-4 and MW-8, and the duplicate sample obtained from monitoring well MW-8. Groundwater analytical results for GRO and BTEX for the perched groundwater zone and sea level aquifer for the May 2009 sampling event are shown on Figures 3 and 4.

BTEX constituents were not detected at concentrations above their respective MTCA Method A cleanup levels in the groundwater samples collected from monitoring wells MW-1, MW-3, or newly installed monitoring well MW-10 during the May 2009 monitoring event.

Groundwater samples from monitoring wells MW-4 and MW-9 through MW-12 were also analyzed for DRO and ORO due to the suspected presence of DRO in soil samples collected from the boring of monitoring well MW-12. The analytical results identified the presence of DRO above the MTCA Method A cleanup level of 500 µg/l in the groundwater samples collected from monitoring wells MW-4 and MW-9 at concentrations of 680 and 800 µg/l, respectively. The laboratory analytical reports for both samples stated that the results were biased high due to the overlap of petroleum hydrocarbon constituents from the volatile range. The groundwater samples from these two locations exhibited the highest concentrations of GRO and BTEX constituents at the Facility during the May 2009 monitoring event. The laboratory reporting limit for DRO for the groundwater sample collected from monitoring well MW-12 was elevated to above the MTCA Method A cleanup level. The laboratory report indicated that the elevated reporting limit for DRO in the monitoring well MW012 sample was due to overlap from the volatile range.

3.3.3 Purge Water Handling

The purge water generated during the May 2009 monitoring event is being stored at the Facility in a 55-gallon drum. A total of approximately 5 gallons of purge and decontamination water was generated during the May 2009 groundwater sampling event.

4.0 SVE SYSTEM OPERATION AND MAINTENANCE ACTIVITIES

Continuous operation of the SVE system at the Facility began on September 13, 2006. SVE treatment system monitoring requirements are specified in the Order of Approval to Construct #960 issued by the Northwest Clean Air Agency. During the period covered by this progress report, Facility visits were conducted by Farallon on November 19 and December 29, 2008 and January 15, February 16, March 10, April 9, and May 12, 2009.

The operating temperature for the catalyst beds in the Catox unit is set at 550 degrees Fahrenheit (°F), with the high temperature alarm set at 1,150°F. The catalyst bed temperatures recorded during Facility visits over this monitoring period ranged from 532 to 558°F. The SVE system operation monitoring data are summarized in Table 5.

The SVE system currently extracts soil vapor from SVE wells SVE-1, SVE-2S, and SVE-2D, and the dual purpose SVE/monitoring well MW-1 at the Facility (Figure 2). The system operates with the air dilution valve located upstream of the SVE blower fully closed so that all influent vapor to the Catox system is derived from the subsurface soil beneath the Facility. As measured with the PID, influent vapor concentrations to the Catox unit have ranged from 16 to 84 ppm over this monitoring period, with treatment system air flow rates ranging from 162.9 to 183.7 standard cubic feet per minute. The system air flow rate is measured upstream of the SVE blower and downstream of the water knockout assembly. The system vacuum was reduced in February 2009 due to recurrent automatic shut down of the system as a result of excessive water accumulation in the water knock-out tank.

Influent vapor samples were collected for laboratory analysis using Tedlar bags during each of the operation and maintenance visits to the Facility between November 19, 2008 and May 12, 2009. The GRO and BTEX analytical results for the influent vapor samples are provided in Table 6. The analytical results for the influent vapor samples for GRO ranged from less than 50 to 190 µg/l. Benzene concentrations for the influent vapor samples ranged from less than 1 to 1 µg/l over the monitoring period covered by this report. Toluene and ethylbenzene concentrations in the influent vapor samples ranged from 1 to 2 µg/l, and total xylenes concentrations ranged from 5 to 11 µg/l over the reporting period. Copies of the laboratory analytical reports for the influent vapor samples are provided in Appendix B.

Based on the measured air flow and influent GRO vapor concentrations, contaminant removal rates ranging from 0.4 to 2.6 pounds per day were calculated over the period of SVE system operation from November 19, 2008 to May 12, 2009. Contaminant mass removal calculations and results are presented in Table 7. An estimated total mass of 12,108 pounds of gasoline-range petroleum hydrocarbon constituents have been removed in the period from system start-up through May 12, 2009.

5.0 SUMMARY AND CONCLUSIONS

The groundwater elevations measured in May 2009 in monitoring wells MW-1 through MW-4 and MW-6 through MW-8, all completed within the perched groundwater zone, were consistent with previous readings and show a westerly direction of groundwater flow (Figure 3). The perched saturated zone of groundwater diminishes to the west and south of the Facility boundary, and was not found in any of the four borings for the new monitoring wells installed in April 2009. Groundwater elevation contours for the new monitoring wells MW-9 through MW-12, all completed in the sea level aquifer with measured depths to water around 102 to 103 feet bgs, show a southerly direction of groundwater flow (Figure 4).

The field screening results and soil analytical data from the boring for monitoring well MW-9 suggest that groundwater containing concentrations of petroleum hydrocarbons may have migrated from the perched saturated zone beneath the Facility to depths below the silty zone that had been found at depths around 55 to 60 feet bgs in previous borings. Soil containing concentrations of GRO, ethylbenzene, and xylenes above MTCA Method A cleanup levels was also found in samples collected the boring for monitoring well MW-12 at various depths including a depth of 45 feet bgs which is above the silt zone which has been encountered beneath the Facility. The evidence of petroleum hydrocarbons in soils at 45 feet bgs in the boring for monitoring well MW-12, suggests a possible secondary source of soil contamination because the soil sample interval is located above the perched groundwater zone that is present beneath the Facility and there is no clear transport mechanism for gasoline to have migrated from the known release area near UST Tank 2 to the location of monitoring well MW-12.

According to Ecology Underground Storage Tank database (UST) records, five USTs were removed in April 2005 from the property at 1690 East Main Street, immediately east of South Harbor Avenue from monitoring well MW-12. A gasoline station, Scotty's Service, formerly operated at the southeast corner of the intersection of Main Street and South Harbor Avenue from the 1950s to about 1979. Farallon obtained the UST site assessment report and documentation related to the removal of the USTs from the Scotty's Service station, which indicated that five gasoline USTs were removed from the property in April 2005. Two of the tanks were reportedly in use from the 1950s to about 1973. The other three USTs were reportedly installed around 1973 and used until about 1979. The analytical summary table provided in the UST site assessment report indicated that none of the results for the confirmation soil samples collected from beneath the USTs, piping, or dispensers exceeded the laboratory reporting limits or MTCA Method A cleanup levels for GRO or BTEX. The Scotty's Service facility does not appear on Ecology's Leaking Underground Storage Tank or Confirmed and Suspected Contaminated Sites databases. Although there is a possibility that releases from the Scotty's Service station may have impacted soil or groundwater in the area south of Main Street, the soil and groundwater data collected to date at the site strongly suggest that the release that occurred from the Whidbey Marine & Auto Supply Facility in 2005 has significantly impacted both the perched groundwater zone and sea level aquifer at and down-gradient of the Facility.

The groundwater data from the new wells installed in the sea level aquifer indicate that the groundwater contains concentrations of GRO and BTEX constituents above the MTCA Method

A cleanup levels. The highest concentrations of GRO, benzene, and toluene in the groundwater samples collected from the sea level aquifer monitoring wells in May 2009 were from monitoring well MW-9. The highest concentrations of ethylbenzene and xylenes detected in the groundwater samples from the monitoring wells installed in the sea level aquifer were from monitoring well MW-12.

The concentrations of GRO and BTEX constituents decreased in the samples collected from monitoring wells MW-2, MW-4, and MW-6 during the May 2009 monitoring event relative to the previous sampling which was conducted in September 2008, whereas the concentrations increased in the samples collected from monitoring well MW-8 over this same period. There was insufficient water for sampling in monitoring well MW-7 during the September 2008 monitoring event.

The SVE system is effectively removing and treating vapor-phase petroleum hydrocarbons from subsurface soil at the Facility. Contaminant extraction rates were estimated to be between 0.4 and 38.7 pounds per day over the period of operation of the treatment system, and currently are at the lower end of this range. Contaminant extractions rates are decreasing as the bulk of the contaminant mass is removed from subsurface soil.

FIGURES

CLEANUP ACTION PROGRESS REPORT
MAY 2009
WHIDBEY MARINE & AUTO SUPPLY FACILITY
1689 Main Street
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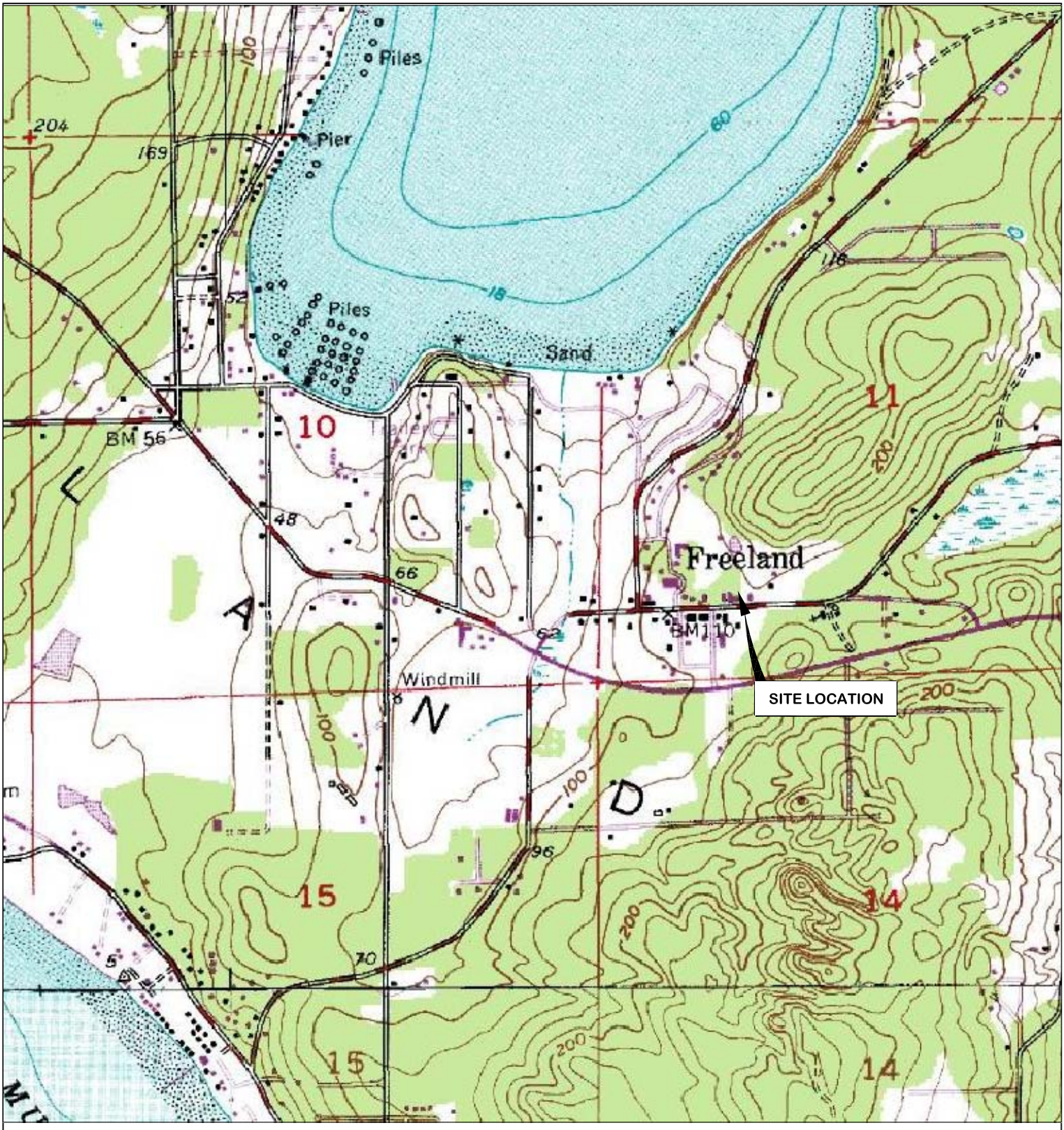

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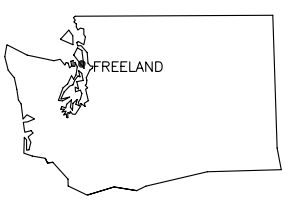

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

FIGURE 1

SITE VICINITY MAP
WHIDBEY MARINE & AUTO SUPPLY
1689 MAIN STREET
FREELAND, WASHINGTON

FARALLON PN: 454-001

Drawn By: DEW	Checked By: PJ	Date: 7/11/07	Disk Reference: 454001

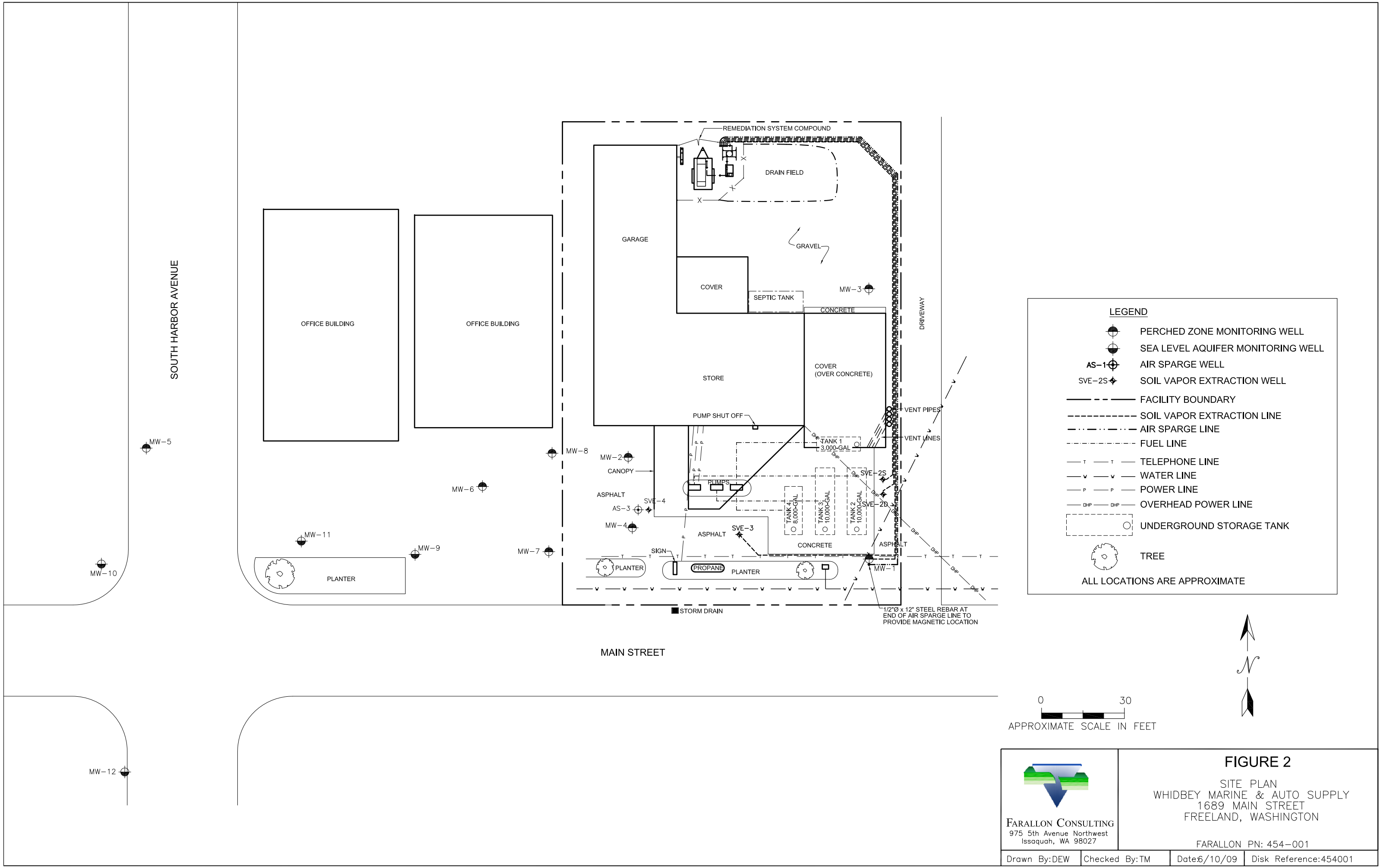

FIGURE 2

SITE PLAN
WHIDBEY MARINE & AUTO SUPPLY
1689 MAIN STREET
FREELAND, WASHINGTON

FARALLON PN: 454-001

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

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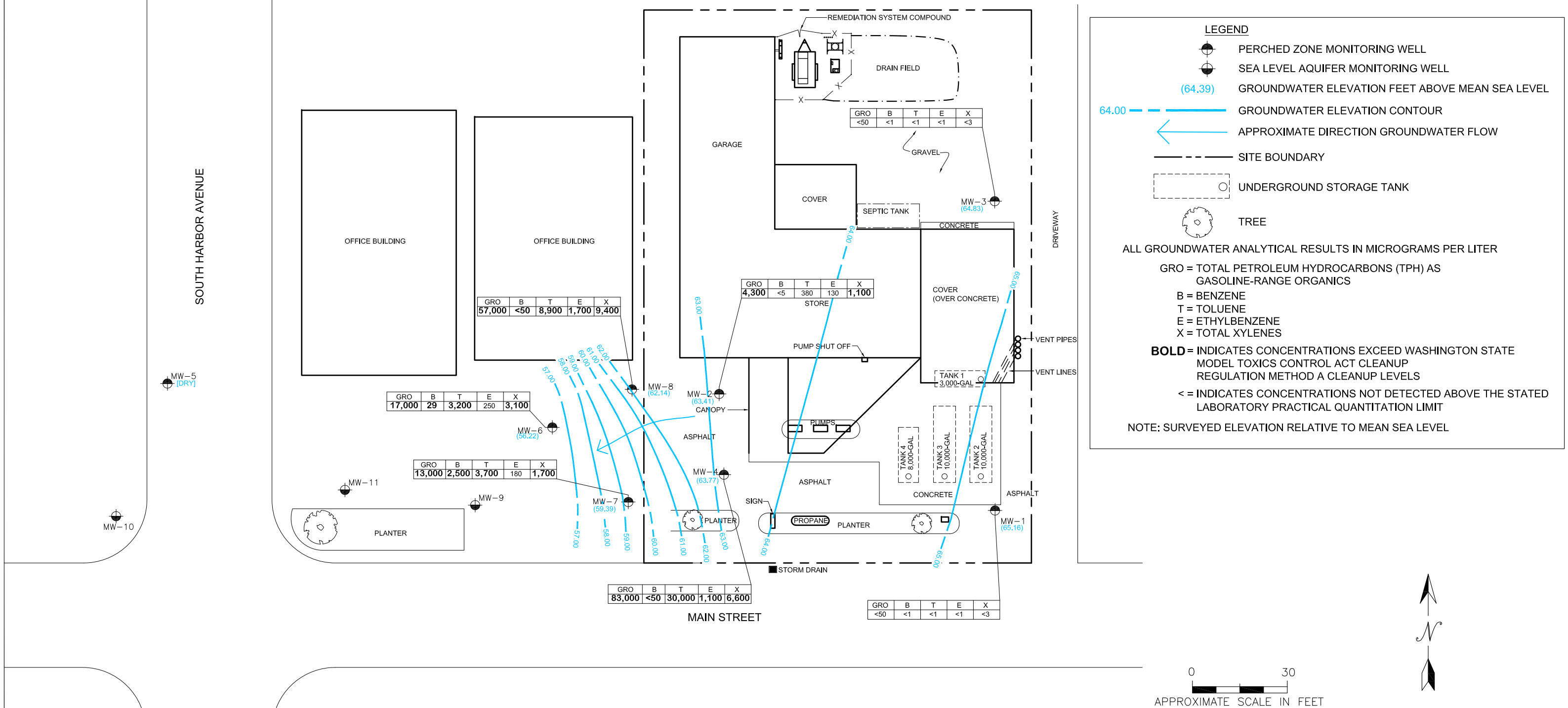


LEGEND

- PERCHED ZONE MONITORING WELL
- SEA LEVEL AQUIFER MONITORING WELL
- (64.39) GROUNDWATER ELEVATION FEET ABOVE MEAN SEA LEVEL
- 64.00 GROUNDWATER ELEVATION CONTOUR
- APPROXIMATE DIRECTION GROUNDWATER FLOW
- SITE BOUNDARY
- UNDERGROUND STORAGE TANK
- TREE

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS
B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = TOTAL XYLENES

BOLD = INDICATES CONCENTRATIONS EXCEED WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD A CLEANUP LEVELS

< = INDICATES CONCENTRATIONS NOT DETECTED ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT

NOTE: SURVEYED ELEVATION RELATIVE TO MEAN SEA LEVEL

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

FIGURE 3

SITE PLAN SHOWING
GROUNDWATER ANALYTICAL RESULTS
PERCHED GROUNDWATER ZONE MAY 12, 2009
WHIDBEY MARINE & AUTO SUPPLY
FREELAND, WASHINGTON

FARALLON PN: 454-001

Drawn By: DEW	Checked By: TM	Date: 7/6/09	Disk Reference: 454001

SOUTH HARBOR AVENUE

OFFICE BUILDING

OFFICE BUILDING

REMEDIATION SYSTEM COMPOUND

DRAIN FIELD

GARAGE

GRAVEL

COVER

SEPTIC TANK

MW-3

CONCRETE

DRIVEWAY

STORE

COVER
(OVER CONCRETE)

VENT PIPES

VENT LINES

PUMP SHUT OFF

TANK 1
3,000-GAL

MW-5

MW-8

MW-2

CANOPY

PUMPS

ASPHALT

TANK 4
8,000-GAL

TANK 3
10,000-GAL

TANK 2
10,000-GAL

MW-6

GRO	B	T	E	X
94,000	18,000	32,000	1,500	7,600

GRO	B	T	E	X
2,300	500	530	19	230

GRO	B	T	E	X
<50	<1	2	<1	<3

MW-4

ASPHALT

CONCRETE

ASPHALT

SIGN

PROPANE

PLANTER

PLANTER

MW-1

MW-11
(11.42)

MW-9
(11.25)

MW-7
11.20

11.40

MW-10
(11.43)

PLANTER

11.40

11.20

11.00

11.00

10.80

10.80

10.60

10.60

10.40

10.40

MW-12
(10.27)

GRO	B	T	E	X
55,000	200	8,900	1,700	9,700

STORM DRAIN

MAIN STREET

LEGEND

PERCHED ZONE MONITORING WELL

SEA LEVEL AQUIFER MONITORING WELL

(11.42) GROUNDWATER ELEVATION FEET ABOVE MEAN SEA LEVEL

11.40 GROUNDWATER ELEVATION CONTOUR

APPROXIMATE DIRECTION GROUNDWATER FLOW

SITE BOUNDARY

UNDERGROUND STORAGE TANK

TREE

ALL GROUNDWATER ANALYTICAL RESULTS IN MICROGRAMS PER LITER

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

B = BENZENE

T = TOLUENE

E = ETHYLBENZENE

X = TOTAL XYLENES

BOLD = INDICATES CONCENTRATIONS EXCEED WASHINGTON STATE MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD A CLEANUP LEVELS

< = INDICATES CONCENTRATIONS NOT DETECTED ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT

NOTE: SURVEYED ELEVATION RELATIVE TO MEAN SEA LEVEL

N

0 30

APPROXIMATE SCALE IN FEET

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

FIGURE 4

SITE PLAN SHOWING
GROUNDWATER ANALYTICAL RESULTS
SEA LEVEL AQUIFER MAY 12, 2009
WHIDBEY MARINE & AUTO SUPPLY
FREELAND, WASHINGTON

FARALLON PN: 454-001

Drawn By:DEW	Checked By:TM	Date:6/10/09	Disk Reference:454001

TABLES

CLEANUP ACTION PROGRESS REPORT
MAY 2009
WHIDBEY MARINE & AUTO SUPPLY FACILITY
1689 Main Street
Freeland, Washington

Farallon PN: 454-001

Table 1
Summary of Laboratory Analytical Results for Soil
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Sample Location	Sample Identification	Sample Date	Depth (feet)[1]	Analytical Results (milligrams per kilogram)						
				DRO[2]	ORO[2]	GRO[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Xylenes[4]
MW-9	MW-9-62.5-041309	4/13/09	62.5	—	—	<3	<0.03	0.1	0.05	0.3
	MW-9-68-041309	4/13/09	68	—	—	**2,600**	**1.4**	**19**	**19**	**160**
	MW-9-85-041309	4/13/09	85	—	—	<3	<0.03	<0.05	<0.05	<0.2
MW-10	MW10-58-041409	4/14/09	58	—	—	<3	<0.03	<0.05	<0.05	<0.2
	MW10-99-041409	4/14/09	99	—	—	<3	<0.03	<0.05	<0.05	<0.2
MW-11	MW11-68-041409	4/14/09	68	—	—	<3	<0.03	<0.05	<0.05	<0.2
	MW11-99-041509	4/15/09	99	—	—	3	**0.06**	0.3	0.09	0.3
MW-12	MW12-45-041509	4/15/09	45	<25	<50	**35**	<0.03	0.9	0.7	4.1
	MW12-56-041509	4/15/09	56	—	—	10	<0.03	<0.05	0.06	0.3
	MW12-65-041509	4/15/09	65	—	—	**990**	**<0.3**	3.7	**12**	**69**
	MW12-85-041509	4/15/09	85	1,300	<50	**<1,700[5]**	**<0.3**	<0.5	0.6	5.1
	MW12-99-041509	4/15/09	99	—	—	**2,800**	**<0.6**	4.8	**22**	**150**
MTCA Method A Cleanup Levels for Soil[6]				**2,000**	**2,000**	**30**	**0.03**	**7**	**6**	**9**

NOTES:

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

— denotes sample not analyzed.

Results in **bold** denote concentrations or laboratory reporting limits above applicable cleanup levels.

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

[1]Depth in feet below ground surface.

[2]Analyzed by Northwest Method NWTPH-Dx.

[3]Analyzed by Northwest Method NWTPH-Gx.

[4]Analyzed by U.S. Environmental Protection Agency Method 8021B.

[5]Laboratory report indicates reporting limit elevated due to semivolatile range product overlap

[6]Washington State Model Toxics Control Act Cleanup Regulation Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

Table 2
Groundwater Elevation Data
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Well Identification	Date	Top of Well Casing Elevation (feet)[1]	Depth to Water (feet)[2]	Groundwater Elevation (feet)[1]
MW-1[3]	12/5/05	116.64	52.54	64.10
	6/7/06	116.45	52.67	63.78
	10/9/06		51.93	64.52
	1/9/07		51.80	64.65
	3/27/07		51.50	64.95
	6/19/07		51.66	64.79
	12/7/07		51.98	64.47
	4/17/08		51.10	65.35
	6/30/08		51.24	65.21
	8/14/08		51.36	65.09
	9/9/08		51.45	65.00
	10/21/08		51.63	64.82
	1/15/09		51.63	64.82
	5/12/09		51.29	65.16
MW-2	12/5/05	117.49	55.06	62.43
	6/7/06		55.56	61.93
	10/9/06		54.69	62.80
	1/9/07		54.60	62.89
	3/27/07		54.44	63.05
	6/19/07		54.50	62.99
	12/7/07		54.81	62.68
	4/17/08		54.06	63.43
	6/30/08		54.12	63.37
	8/14/08		54.21	63.28
	9/9/08		54.26	63.23
	10/21/08		54.44	63.05
	1/15/09		54.40	63.09
	5/12/09		54.08	63.41
MW-3	12/5/05	117.47	53.48	63.99
	6/7/06		53.96	63.51
	10/9/06		53.26	64.21
	1/9/07		53.02	64.45
	3/27/07		52.82	64.65
	6/19/07		52.70	64.77
	12/7/07		53.33	64.14

Table 2
Groundwater Elevation Data
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Well Identification	Date	Top of Well Casing Elevation (feet)[1]	Depth to Water (feet)[2]	Groundwater Elevation (feet)[1]
MW-3	4/17/08	117.47	52.50	64.97
	6/30/08		52.66	64.81
	8/14/08		52.76	64.71
	9/9/08		52.84	64.63
	10/21/08		52.99	64.48
	1/15/09		53.01	64.46
	5/12/09		52.64	64.83
MW-4	3/27/07	117.27	53.94	63.33
	6/19/07		54.02	63.25
	12/7/07		54.28	62.99
	4/17/08		53.58	63.69
	6/30/08		53.64	63.63
	8/14/08		53.71	63.56
	9/9/08		53.76	63.51
	10/21/08		53.89	63.38
	1/15/09		53.88	63.39
	5/12/09		53.50	63.77
MW-6	4/17/08	116.56	59.84	56.72
	6/30/08		60.07	56.49
	8/14/08		60.26	56.30
	9/9/08		60.35	56.21
	10/21/08		60.47	56.09
	1/15/09		60.50	56.06
	5/12/09		60.34	56.22
MW-7	4/17/08	116.82	56.98	59.84
	6/30/08		57.42	59.40
	8/14/08		57.87	58.95
	9/9/08		58.25	58.57
	10/21/08		58.34	58.48
	1/15/09		DRY	DRY
	5/12/09		57.43	59.39
MW-8	4/17/08	117.23	55.29	61.94
	6/30/08		55.34	61.89
	8/14/08		55.33	61.90
	9/9/08		55.36	61.87

Table 2
Groundwater Elevation Data
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Well Identification	Date	Top of Well Casing Elevation (feet)[1]	Depth to Water (feet)[2]	Groundwater Elevation (feet)[1]
MW-8	10/21/08	117.23	55.47	61.76
	1/15/09		55.37	61.86
	5/12/09		55.09	62.14
MW-9	5/12/09	114.79	103.54	11.25
MW-10	5/12/09	113.45	102.02	11.43
MW-11	5/12/09	114.24	102.82	11.42
MW-12	5/12/09	114.23	103.96	10.27

NOTES:

[1]Feet above mean sea level, based on May 2008 survey data.

[2]Feet below top of well casing.

[3]Top of well casing elevation adjusted using change in total depth measurements before and after change in well casing length following soil vapor extraction system installation.

Table 3
Summary of Laboratory Analytical Results for GRO and BTEX in Groundwater Samples
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Sample Location	Sample Identification	Sample Date	Analytical Results (micrograms per liter)				
			GRO[1]	Benzene[2]	Toluene[2]	Ethylbenzene[2]	Xylenes[2]
MW-1	MW1-120505	12/5/05	**4,200**	**480**	770	65	318
	MW1-060706	6/7/06	**5,800**	**500**	1,000	70	780
	MW-1-100906	10/9/06	**17,000**	**2,400**	**3,800**	270	**2,200**
	MW1-010907	1/9/07	**1,500**	**14**	6	11	120
	QA/QC-010907	1/9/07	**1,500**	**11**	6	10	110
	MW1-032707	3/27/07	290	1	1	<1	17
	QA/QC-032707	3/27/07	320	1	<1	<1	19
	MW1-061907	6/19/07	73	<1	<1	<1	<3
	MW1-120707	12/7/07	110	<1	<1	<1	<3
	MW1-041808	4/18/08	74	<1	<1	<1	<3
	MW1-090908	9/9/08	68	<1	<1	<1	<3
	MW1-051409	5/14/09	<50	<1	<1	<1	<3
MW-2	MW2-120505	12/5/05	570	**110**	110	2.8	50
	MW2-060706	6/7/06	**2,800**	**440**	540	15	430
	MW2-100906	10/9/06	370	**20**	44	1	77
	MW2-010907	1/9/07	730	**35**	69	11	150
	MW2-032707	3/27/07	610	**6**	9	<1	150
	MW2-061907	6/19/07	**1,000**	**17**	52	22	200
	MW2-120707	12/7/07	**2,300**	**7**	310	36	270
	MW2-041808	4/18/08	**3,700**	<1	57	33	890
	MW2-090908	9/9/08	**20,000**	**<50**	**3,100**	470	**4,200**
	MW2-051309	5/13/09	**4,300**	<5	380	130	**1,100**
MW-3	MW3-120505	12/5/05	<100	<1.0	<1.0	<1.0	<2.0
	FD-120505	12/5/05	<100	<1.0	<1.0	<1.0	<2.0
	MW3-060706	6/7/06	<50	<1	<1	<1	<3
	MW3-100906	10/9/06	<50	<1	<1	<1	<3
	MW3-010907	1/9/07	<50	<1	<1	<1	<3
	MW3-032707	3/27/07	<50	<1	<1	<1	<3
	MW3-061907	6/19/07	<50	<1	<1	<1	<3
	QA/QC-061907	6/19/07	<50	<1	<1	<1	<3
	MW3-120707	12/7/07	<50	<1	<1	<1	<3
	MW3-041808	4/18/08	<50	<1	<1	<1	<3
	MW3-090908	9/9/08	<50	<1	<1	<1	<3
	MW3-051409	5/14/09	<50	<1	<1	<1	<3
MTCA Method A Cleanup Levels for Groundwater[3]			**800**	**5**	**1,000**	**700**	**1,000**

Table 3
Summary of Laboratory Analytical Results for GRO and BTEX in Groundwater Samples
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Sample Location	Sample Identification	Sample Date	Analytical Results (micrograms per liter)				
			GRO[1]	Benzene[2]	Toluene[2]	Ethylbenzene[2]	Xylenes[2]
MW-4	MW4-032707	3/27/07	**99,000**	**31,000**	**32,000**	**970**	**6,000**
	MW4-061907	6/19/07	**110,000**	**22,000**	**36,000**	**1,600**	**8,200**
	MW4-120707	12/7/07	**39,000**	**7,600**	**12,000**	300	**2,400**
	QA/QC-120707	12/7/07	**60,000**	**9,500**	**18,000**	**710**	**4,700**
	MW4-041808	4/18/08	**140,000**	**530**	**42,000**	**1,600**	**9,400**
	MW4-090908	9/9/08	**120,000**	**150**	**40,000**	**2,000**	**11,000**
	QA/QC-1-090908	9/9/08	**120,000**	**150**	**43,000**	**1,900**	**11,000**
	MW4-051409	5/14/09	**83,000**	**<50**	**30,000**	**1,100**	**6,600**
MW-6	MW6-041708	4/18/08	**23,000**	**260**	**1,500**	530	**3,600**
	MW6-090908	9/9/08	**42,000**	**450**	**8,500**	**1,300**	**7,800**
	MW6-051409	5/14/09	**17,000**	**29**	**3,200**	250	**3,100**
MW-7	MW7-041808	4/18/08	**54,000**	**13,000**	**17,000**	420	**3,700**
	MW7-051409	5/14/09	**13,000**	**2,500**	**3,700**	180	**1,700**
MW-8	MW8-041808	4/18/08	**5,400**	<1	57	57	890
	QA/QC-1-041808	4/18/08	**5,600**	<1	42	55	930
	MW8-090908	9/9/08	**34,000**	**<50**	**3,500**	670	**6,700**
	MW8-051309	5/13/09	**60,000**	**<50**	**9,000**	**1,800**	**9,500**
	QA/QC-051309	5/13/09	**57,000**	**<50**	**8,900**	**1,700**	**9,400**
MW-9	MW9-051309	5/13/09	**94,000**	**18,000**	**32,000**	**1,500**	**7,600**
MW-10	MW10-051309	5/13/09	<50	<1	2	<1	<3
MW-11	MW11-051309	5/13/09	**2,300**	**500**	530	19	230
MW-12	MW12-051309	5/13/09	**55,000**	**200**	**8,900**	**1,700**	**9,700**
MTCA Method A Cleanup Levels for Groundwater[3]			**800**	**5**	**1,000**	**700**	**1,000**

NOTES:

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

Results in **bold** denote concentrations or laboratory reporting limits above applicable cleanup levels.

BTEX = benzene, toluene, ethylbenzene, and xylenes
GRO = total petroleum hydrocarbons as gasoline-range organics

[1]Analyzed by Northwest Method NWTPH-Gx.

[2]Analyzed by U.S. Environmental Protection Agency Method 8021B.

[3]Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

Table 4
Summary of Laboratory Analytical Results for DRO and ORO in Groundwater Samples
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Sample Location	Sample Identification	Sample Date	Analytical Results (micrograms per liter)[1]	
			DRO	ORO
MW-4	MW4-051409	5/14/2009	**680**[2]	<250
MW-9	MW9-051309	5/13/2009	**800**[2]	<250
MW-10	MW10-051309	5/13/2009	<130	<250
MW-11	MW11-051309	5/13/2009	<130	<250
MW-12	MW12-051309	5/13/2009	**<1,300**[3]	<250
MTCA Method A Cleanup Levels for Groundwater[4]			**500**	**500**

NOTES:

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

Results in **bold** denote concentrations or laboratory reporting limits above applicable cleanup levels.

[1]Analyzed by Northwest Method NWTPH-Dx.

[2]DRO result is being influenced by the presence of GRO.

[3]Laboratory reporting limit for DRO is being influenced by the presence of GRO.

[4]Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

Table 5
Soil Vapor Extraction System Operation Monitoring Results
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Date	Air Flow Rate[1] (scfm)	Vacuum[2] (iow)	Flow Rates[3] (scfm)				Influent Concentrations							Catalyst Temperature (ºF)
							SVE System (ppmv)[4]		PID Measurements (ppm)					
			MW-1	SVE-2D	SVE-2S	SVE-3	Gasoline	Benzene	Catox Inlet[5]	MW-1[6]	SVE-2D[6]	SVE-2S[6]	SVE-3[6]	
9/8/06	177.0	17.5	NM	NO	NO	NO	1,700	NM	1,320	NM	NO	NO	NO	909
9/13/06	167.0	NM	NM	NO	NO	NO	NM	NM	843	NM	NO	NO	NO	792
9/20/06	179.0	NM	NM	NO	NO	NO	NM	NM	1,248	NM	NO	NO	NO	980
9/27/06	185.2	17.0	18.73	NO	NO	NO	2,200	NM	1,865	NM	NO	NO	NO	984
10/04/06	179.1	18.5	24.77	NO	NO	NO	2,200	NM	NM	NM	NO	NO	NO	1,075
10/09/06	188.1	18.0	26.48	NO	NO	NO	2,000	15	1,909	NM	NO	NO	NO	1,048
11/06/06	172.8	19.0	11.84	25.12	20.51	NO	800	4	1,230	20-79	4,160	>9,999	NO	879
11/20/06	172.8	16.0	11.84	34.53	11.84	NO	500	1	1,200	450-1,000	4,950	900-1,200	3,320	845
12/19/06	176.0	26.0	13.24	49.50	32.43	33.5	200	1	1,050	400-700	1,050	600	475-700	930
1/9/07	166.3	28.5	13.24	57.4	8.37	47.7	100	1	1,750	210	1,950	110	1,200	900
2/6/07	169.6	38.5	5.92	83.7	11.84	71.3	80	0.5	1,489	130	946	65.9	425	723
3/12/07	154.2	38.5	14.5	83.7	11.84	70.1	150	<1	645	14.1	600	22.5	230	663
3/27/07	154.2	38.5	11.84	82.7	22.93	71.3	175	<1	415	7.9	7.8	1.6	1.5	660
5/18/07	159.5	36.0	10.26	82.7	5.92	70.1	50	<1	335	3.5	1.6	1.7	2.3	642
6/19/07	166.3	34.5	11.84	79.4	10.26	74.9	60	<1	435	0	0.0	0	0.0	647
7/16/07	156.0	38.0	10.26	87.8	10.26	74	100	<1	350	0.03	0.2	0.3	0.3	641
8/16/07	166.3	38.0	8.37	74.9	26.48	79.4	150	<1	288	1	1.1	1.3	1.1	646
9/14/07	210.3	39.0	26.48	85.8	25.12	74.9	30	<0.2	244	0.6	0.5	0.18	1.6	571
10/22/07	135.1	40.0	42.7	85.8	45.9	70.1	<30	<0.2	258	0	0.0	0	0.0	578
12/6/07	182.2	40.0	41.87	83.7	73.7	68.8	<30	<0.2	282	0.9	0.3	0.7	0.5	618
1/10/08	157.8	40.2	13.24	81.6	8.37	70.1	NM	NM	184	0.2	0.2	0.4	0.3	646
2/8/08	172.8	43.0	16.75	102.56	99.09	72.5	NM	NM	162	0	1.5	0.3	0.7	636
3/21/08	386.4	43.0	29.01	132.4	39.72	70.1	40	<0.1	127	1.3	0.9	0.5	1.1	574
4/17/08	182.2	42.0	32.43	81.6	41.87	83.7	60	0.1	105	0	0.1	0.2	0.0	571

Table 5
Soil Vapor Extraction System Operation Monitoring Results
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Date	Air Flow Rate[1] (scfm)	Vacuum[2] (iow)	Flow Rates[3] (scfm)				Influent Concentrations							Catalyst Temperature (ºF)
							SVE System (ppmv)[4]		PID Measurements (ppm)					
			MW-1	SVE-2D	SVE-2S	SVE-3	Gasoline	Benzene	Catox Inlet[5]	MW-1[6]	SVE-2D[6]	SVE-2S[6]	SVE-3[6]	
5/14/08	159.5	40.0	11.84	87.8	11.84	79.4	30	<0.1	106	0.6	0.4	0.8	0.7	562
6/30/08	196.8	39.0	26.48	77.2	27.77	83.7	100	<0.1	105	0.1	0.6	0.3	0.2	568
8/14/08	166.3	30.8	11.84	78.3	18.73	72.5	60	<0.1	71	1.2	0.0	0.0	0.0	565
9/9/08	210.3	27.0	10.26	57.4	60.7	53.6	50	<1	86	0.3	0.9	0.8	0.1	564
10/21/08	166.3	29.0	8.37	59.2	59.5	53.0	30	<1	58	0.0	0.0	0.0	0.0	559
11/19/08	166.3	31.0	13.24	59.5	59.8	52.3	30	<1	84	0.1	0.2	0.0	0.0	558
12/29/08	162.9	30.0	17.76	59.2	64.9	56.8	20	<1	42	0.2	0.5	0.1	0.0	547
1/15/09	183.7	31.0	10.26	55.2	32.43	53.0	10	<1	46	0.4	0.4	0.3	0.3	555
2/16/09	169.6	24.0	10.26	45.5	50.2	45.9	<30	<1	25	0.0	0.0	0.0	0.0	532
3/10/09	168.0	24.0	10.26	45.1	48.8	42.7	<30	<0.2	16	0.2	0.2	0.2	0.1	532
4/9/09	182.2	24.0	10.26	47.4	45.9	49.9	<30	<0.2	20	0.0	0.1	0.3	0.1	541
5/12/09	164.6	21.0	13.24	47.4	44.7	53.6	<30	<0.2	26	0.1	0.1	0.2	0.4	554

NOTES:

[1]Soil vapor extraction (SVE) remediation system influent air flow rate measured upstream of blower.

[2]Vacuum measurement collected downstream of water knockout and upstream of SVE blower.

[3]Air flow rates as measured at individual SVE pipes at piping array control manifold.

[4]Air concentrations measured using compound-specific Gastec colorimetric detection tubes and pump as measured through sampling port located downstream of SVE system blower at flame arrestor.

[5]Catox inlet concentrations measured at sampling port located downstream of SVE system blower at flame arrestor.

[6]Concentrations at wells measured with PID at individual SVE pipes at piping array control manifold.

> = concentration greater than instrument reporting range

º F = degrees Fahrenheit

iow = inches of water

NM = not measured

NO = well not online

PID = photoionization detector

ppm = parts per million total organic vapors in isobutylene equivalents using a 10.6 electron volt lamp

ppmv = parts per million volume

scfm = standard cubic feet per minute

SVE = soil vapor extraction

Table 6
Summary of Laboratory Analytical Results for Vapor Samples
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Sample Identification	Sample Date	Analytical Results (micrograms per liter)				
		GRO[1]	Benzene[2]	Toluene[2]	Ethylbenzene[2]	Xylenes[2]
Influent - 092006	9/20/06	600	84	25	10	40
Influent - 100906	10/9/06	2,700	330	200	21	78
Influent -121906	12/19/06	1,500	130	86	33	120
Influent - 010907	1/9/07	1,600	100	320	38	140
Influent - 020607	2/6/07	710	34	160	26	100
Influent - 031207	3/12/07	630	23	93	27	130
Influent - 032707	3/27/07	400	16	49	15	68
Influent - 051807	5/18/07	560	14	65	30	160
Influent - 061907	6/19/07	430	7	25	12	46
Influent-071607	7/16/07	350	10	32	18	95
Influent-081607	8/16/07	320	11	27	13	83
Influent-091707	9/14/07	230	9	18	8	48
Influent-102207	10/22/07	260	10	10	5	28
Influent-120607	12/6/07	440	11	20	8	49
Influent-11008	1/10/08	420	6	10	6	34
Influent-020808	2/8/08	110	4	9	4	26
Influent-032608	3/26/08	1,200	2	7	4	22
Influent-041708	4/17/08	440	3	6	4	19
Influent-051408	5/14/08	270	1	4	2	13
Influent-063008	6/30/08	590	3	5	3	13
Influent-081408	8/14/08	280	3	4	3	14
Influent-090908	9/9/08	220	2	2	2	7
Influent-102108	10/21/08	170	1	2	2	12
Influent-111908	11/19/08	190	1	2	2	11
Influent-122908	12/29/08	110	<1	2	2	10
Influent-011509	1/15/09	85	<1	2	2	8
Influent-021609	2/16/09	70	<1	1	1	6
Influent-031009	3/10/09	<50	<1	1	1	5
Influent-040909	4/9/09	66	<1	1	1	6
Influent-051209	5/12/09	71	<1	1	1	6

NOTES:

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

[1]Analyzed by Northwest Method NWTPH-Gx.

[2]Analyzed by U.S. Environmental Protection Agency Method 8021.

GRO = total petroleum hydrocarbons as gasoline-range organics

Table 7
Contaminant Mass Removal Calculations
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Date	Flow Rate (scfm)	Influent Concentration[1] (ppmv)	Conversion Factor[2]	Extraction Rate (pounds/day)	Number of Days	Mass Removed[3] (pounds)	Notes
9/13/06	167	1,700	0.000379	107.6	-	-	Using 9/8/06 influent data
9/20/06	179	1,700	0.000379	115.3	7	753	Using 9/8/06 influent data
9/27/06	185.2	2,200	0.000379	154.4	7	807	
10/04/06	179.1	2,200	0.000379	149.3	7	1,081	
10/09/06	188.1	2,000	0.000379	142.6	5	747	
11/06/06	172.8	800	0.000379	52.4	25	3,564	3 days down time this period
11/20/06	172.8	500	0.000379	32.7	13	681	1 day down time this period
12/19/06	176.0	200	0.000379	13.3	26	851	3 days down time this period
1/9/07	166.3	100	0.000379	6.3	21	280	
2/6/07	169.6	80	0.000379	5.1	28	176	
3/12/07	154.22	150	0.000379	8.8	33	170	1 day down time this period
3/27/07	154.22	175	0.000379	10.2	15	132	
5/18/07	159.5	50	0.000379	3.0	17	174	35 days down time this period
6/19/07	166.3	60	0.000379	3.8	32	97	
7/16/07	156	100	0.000379	5.9	27	102	
8/16/07	166.3	150	0.000379	9.5	31	183	
9/14/07	210.3	30	0.000379	2.4	29	274	
10/22/07	135.1	57	0.000379	2.9	30	72	Using Tedlar bag lab data
12/6/07	182.2	97	0.000379	6.7	10	67	35 days down time this period, bag data
1/10/08	157.8	92	0.000379	5.5	33	182	3 days down time this period, bag data
2/8/08	172.8	24	0.000379	1.6	26	41	3 days down time, Tedlar bag data
3/21/08	386.4	264	0.000379	38.7	9	348	31 days down time this period, bag data
4/17/08	182.2	97	0.000379	6.7	27	181	Using Tedlar bag lab data
5/14/08	159.5	59	0.000379	3.6	20	72	7 days down time this period, bag data
6/30/08	196.8	130	0.000379	9.7	47	454	Tedlar bag lab data
8/14/08	166.3	62	0.000379	3.9	45	174	Tedlar bag lab data
9/9/08	210.3	48	0.000379	3.8	26	100	Tedlar bag lab data
10/21/08	166.3	37	0.000379	2.4	42	99	Tedlar bag lab data
11/19/08	166.3	41.8	0.000379	2.6	29	76	Tedlar bag lab data
12/29/08	162.9	24.2	0.000379	1.5	40	60	Tedlar bag lab data

Table 7
Contaminant Mass Removal Calculations
Whidbey Marine & Auto Supply
Freeland, Washington
Farallon PN: 454-001

Date	Flow Rate (scfm)	Influent Concentration[1] (ppmv)	Conversion Factor[2]	Extraction Rate (pounds/day)	Number of Days	Mass Removed[3] (pounds)	Notes
1/15/09	183.7	18.7	0.000379	1.3	17	22	Tedlar bag lab data
2/16/09	169.6	15.4	0.000379	1.0	32	32	7 days down time this period, bag data
3/10/09	168.0	5.5	0.000379	0.4	14	5	8 days down time this period, bag data
4/9/09	182.2	14.5	0.000379	1.0	25	25	5 days down time this period, bag data
5/12/09	164.6	15.6	0.000379	1.0	26	25	7 days down time this period, bag data

Total Mass in Pounds Removed Between Start-up and 5/12/09 12,108

NOTES:

[1]Measured by Gastec gasoline colorimetric detection tubes as ppmv or laboratory bag sample in µg/L using the following conversion:

Influent concentration in ppmv = (influent concentration in µg/L*liters of gas per mole)/molecular weight of gasoline

Where: liters of gas per mole = 22.4133 liters

molecular weight of gasoline = 102[4]

[2]Conversion factor = density of air *minutes per day*molecular weight of gasoline/(molecular weight of air*1,000,000)

Where: density of air = 0.0748 pounds/cubic foot;

minutes per day = 1,440;

molecular weight of gasoline = 102[4]; and

molecular weight of air = 28.96[5].

[3]Mass removed = flow rate (scfm)*influent concentration (ppmv)*0.000379*extraction rate (pounds/day)*number of days since last reading.

[4]Reference: U.S. Department of Army Corps of Engineers, *Environmental Engineering Manual EM 1110-1-4001 , Appendix B - Properties of Common Organic Pollutants*

[5]Reference: *Handbook of Chemistry and Physics* , 80th ed., Section 14, page 16.

NR = system not running

ppmv = parts per million volume

scfm = standard cubic feet per minute

µg/L = micrograms per liter

APPENDIX A
BORING AND WELL INSTALLATION LOGS

CLEANUP ACTION PROGRESS REPORT
MAY 2009
WHIDBEY MARINE & AUTO SUPPLY FACILITY
1689 Main Street
Freeland, Washington

Farallon PN: 454-001

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

USCS Classification and Graphic Legend

Major Divisions			USCS Graphic Symbol	USCS Letter Symbol	Lithologic Description
Coarse-Grained Soil (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well graded GRAVEL, well graded GRAVEL with sand
				GP	Poorly graded GRAVEL, GRAVEL with sand
		GRAVEL WITH FINES (Appreciable amount of fines)		GP-GM	Poorly graded GRAVEL - GRAVEL with sand and silt
				GM	Silty GRAVEL
				GC	Clayey GRAVEL
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well graded SAND
				SP	Poorly graded SAND
		SAND WITH FINES (Appreciable amount of fines)		SP-SM	Poorly graded SAND - silty SAND
				SM	Silty SAND
				SC	Clayey SAND
				SM-ML	SILT - Silty SAND
Fine-Grained Soil (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	SILT
				CL	CLAY
				OL	Organic SILT
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic SILT
				CH	Inorganic CLAY
				OH	Organic CLAY
		Highly Organic Soil		PT	Peat
OTHER MATERIALS	PAVEMENT			AC	Asphalt concrete
				CO	Concrete
	OTHER			RK	Bedrock
				WD	Wood Debris
				DB	Debris (Miscellaneous)
				PC	Portland cement

Legend

- Sample Interval
- G — Grab Sample Interval
- Water level at time of drilling
- Water level at time of sampling
- Blank Casing
- Screened Casing
- Cement Grout
- Bentonite
- Sand Pack
- Well Cap

Solid line indicates sharp contact between units well defined.

Dashed line indicates gradational contact between units.

feet bgs = feet below ground surface
NE = Not Encountered
NA = Not Applicable
PID = Photoionization Detector
PN = Project Number
units = PID units calibrated to 100 ppm isobutylene
USCS = Unified Soil Classification System

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-9

Client: Marty Winn
Project: Whidbey Marine & Auto
Location: Freeland, WA

Farallon PN: 454-001

Logged By: T. Mulhern

Date/Time Started:	4/13/09 0900	**Sampler Type:**	D&M SS 18"x2"
Date/Time Completed:	4/13/09 1600	**Drive Hammer (lbs.):**	300
Equipment:	CME	**Depth of Water ATD (ft bgs):**	105
Drilling Company:	Cascade Drilling	**Total Boring Depth (ft bgs):**	110
Drilling Foreman:	Andy	**Total Well Depth (ft bgs):**	110
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm*)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0-0.3' Asphalt.	AC							Cap
										Concrete
5										
		9'-10.5' Poorly graded sand (95% sand/5% silt), fine sand, gray with rust mottling, loose, moist, no odor.	SP		80	3/3/4	1.3			
10										Bentonite
		14'-15.5' Poorly graded sand (100% sand), fine sand, gray, medium dense, moist, no odor.	SP		100	8/9/10	1.1			
15										
		19'-20.5' Poorly graded sand (90% sand/10% gravel), fine to coarse sand, fine gravel, gray, dense, moist, no odor.	SP		75	8/12/14	1.3			
20										

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-9

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
25		24'-25.5' Poorly graded gravel with sand (60% gravel/40% sand), fine to coarse gravel, fine to coarse sand, gray, very dense, moist, trace silt, no odor.	GP		90	11/24/44	1.2			
30		29'-30' Same as above.	GP		90	9/11/14	1.3			
		30'-30.5' Poorly graded sand (95% sand/5% silt), fine sand, gray, medium dense, moist, no odor.	SP							
35		34'-35.5' Poorly graded sand with gravel (65% sand/35% gravel), fine to medium sand, gray-brown, dense, moist, trace silt, no odor.	SP		100	10/12/22	1.4			
40		39'-39.5' Same as above.	SP		95	10/12/15	1.1			
		39.5'-40.4' Poorly graded sand (95% sand/5% silt), fine to coarse sand, gray-brown, medium dense, moist, no odor.	SP							
		40.4'-40.5' Silt (90% silt/10% sand), fine sand, gray-brown, very stiff, moist, no odor.	ML							
45		44'-45.5' Poorly graded sand (95% sand/5% silt), fine to medium sand, gray-brown, medium dense, moist, no odor.	SP		100	10/12/12	1.3			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-9

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
50		49'-50.5' Same as above, no odor.	SP		90	10/12/12	1.4			
55		55'-56.5' Poorly graded sand with silt (90% sand/10% silt), fine sand, gray, medium dense, moist, no odor.	SP-SM		95	5/11/12	1.8			
		56.5'-57' Same as above.	SP-SM		90	7/9/10	2.1			
		57'-57.8' Silty sand (60% sand/35% silt/5% gravel), fine to medium sand, gray with trace amount of rust mottling, stiff, moist, no odor.	SM		95	11/24/13	2.5	MW9-58.5-041309		
		57.8'-58' Silt with sand (80% silt/15% sand/5% gravel), fine to medium sand, gray, moist, no odor.	ML							
60		58'-59.5' Silty sand (75% sand/20% silt/5% gravel), fine to medium sand, gray, dense, moist, cobbles, no odor.	SM		70	30/50-5"	3.6			
		59.5'-60.4' Poorly graded sand with gravel (55% sand/45% gravel), fine to coarse sand, fine to coarse gravel, gray, very dense, moist, cobbles, no odor.	SP							
		60.4'-61' No recovery.	GP		60	29/50-4"	3.4	MW9-62.5-041309	X	
		62'-62.8' Poorly graded gravel with sand (65% gravel/35% sand) fine to coarse gravel, fine to coarse sand, very dense, wet to moist, cobbles, slight petroleum-like odor.	GP		75	23/50-4"	6.6			
65		62.8'-63.5' No Recovery.	GP		5	50-3"	13			
		63.5'-64.3' Same as above, slight petroleum-like odor.	GP		95	11/11/20	934			
		64.3'-65' No Recovery	ML					MW9-67-041309		
		65'-65.3' Poor recovery, cobble.	SP		90	7/20/21	1,528	MW9-68-041309	X	
		65.3'-66.5' No Recovery.	SP							
70		66.5'-66.7' Poorly graded gravel with sand (65% gravel/35% sand) fine to coarse gravel, fine to coarse sand, dense, wet, cobbles, slight petroleum-like odor.	SP		95	50/27/29	773			
		66.7'-67.6' Silt (100% silt), brown, moist, hard, moderate petroleum-like odor.	SP		95	17/21/22	110			
		67.6'-68' Poorly graded sand (100% sand), gray, moist, trace silt, strong petroleum-like odor.	SP		95	17/21/21	19.9			
		68'-69.5' Same as above, very dense.	SP		95	19/26/27	17.9			
75		69.5'-71' Same as above, dense.								

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-9

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
		71'-72.5' Same as above, fine to coarse sand, dense.	SP		100	12/21/23	8.6			
		72.5'-74' Same as above, fine to medium sand, dense, strong petroleum-like odor.	SP		100	15/24/27	22.3			
		74'-75.5' Same as above, very dense, moderate petroleum-like odor.								
		75.5'-77' Same as above, dense.	SP		100	18/19/23	5.8			
		77'-78.5' Same as above, very dense, moderate petroleum-like odor.								
80		78.5'-80' Same as above, dense, slight petroleum-like odor.								
85		84'-85.5' Poorly graded sand (100% sand), fine to coarse, gray, moist, very dense, trace silt, trace fine gravel, slight petroleum-like odor.	SP		90	13/24/25	9.1	MW9-85-041309	X	
90		89'-90.5' Same as above, very dense, no gravel, slight petroleum like odor.	SP		95	12/24/25	8.2			
95		94'-95.5' Same as above, very dense, slight to no odor.	SP		95	20/27/29	7.1			Bentonite
100		99'-100.5' Same as above, very dense, no odor.	SP		90	15/25/25	9.4			Sand

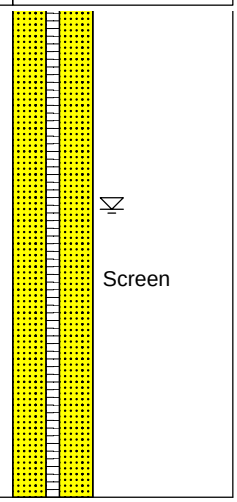
Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110
Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite
Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-9

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
105		104'-105.5' Same as above, saturated, dense, moderate petroleum-like odor.	SP		100	12/18/20	110	MW-9104.5-041309		Screen
110										



Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-10

Client: Marty Winn
Project: Whidbey Marine & Auto
Location: Freeland, WA

Farallon PN: 454-001

Logged By: T. Mulhern

Date/Time Started:	4/14/09 0830	**Sampler Type:**	D&M SS 18"x2"
Date/Time Completed:	4/14/09 1300	**Drive Hammer (lbs.):**	300
Equipment:	CME	**Depth of Water ATD (ft bgs):**	105
Drilling Company:	Cascade Drilling	**Total Boring Depth (ft bgs):**	110
Drilling Foreman:	Andy	**Total Well Depth (ft bgs):**	110
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm*)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0-0.3' Aspahalt.	AC							Cap; Concrete
10		9'-10.5' Poorly graded sand (95% sand/5% silt), fine to medium sand, gray-brown, moist, dense, no odor.	SP		100	4/6/6	0.0			Bentonite
15		14'-15.5' Poorly graded sand (100% sand), fine sand, gray, medium dense, moist, no odor.	SP		70	7/9/10	0.0			
20		19'-20.5' Well graded sand (100% sand), fine to coarse sand, gray, medium dense, moist, no odor.	SW		80	4/11/12	0.0			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-10

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
25		24'-25.5' Poorly graded sand (95% sand/5% silt), fine sand, gray, medium dense, moist, no odor.	SP		85	8/5/13	0.0			
30		29'-30.2' Same as above.	SP		90	8/9/10	0.0			
		30.2'-30.5' Sandy silt (60% silt/30% sand), fine sand, gray-brown, stiff, moist to wet, no odor.	ML							
35		34'-35.5' Silty sand (85% sand/15% silt), fine sand, gray-brown, medium dense, moist, no odor.	SM		90	6/12/12	0.0			
40		39'-40.5' Poorly graded sand (100% sand), fine sand, gray-brown, meidum dense, moist, trace silt, no odor.	SP		90	7/7/12	0.0			
45		44'-45.5' Poorly graded sand (100% sand), fine to medium sand, gray, medium dense, moist, no odor.	SP		95	9/12/13	0.0			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-10

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
50		49'-50.5' Same as above, no odor.	SP		80	9/13/13	0.0			
55		54'-55.5' Poorly graded sand (100% sand), fine sand, gray, medium dense, moist, no odor.	SP		95	9/14/14	0.0			
		55.5' 57' Same as above, no odor.	SP		90	13/17/17	0.0			
		57'-58.5' Same as above, no odor.	SP		90	11/13/15	0.0	MW10-58-041409	X	
		58.5'-59.7' Same as above, no odor.	SP		100	14/16/19	0.1			
60		59.7'-60' Silt (90% silt/10% sand), fine to coarse sand, brown, hard, moist, sand in 1 cm thick layers, no odor.	ML		100	7/9/10	0.0			
		60'-61.5' Gravelly silt (70% silt/25% gravel/5% sand), fine to coarse gravel, fine to coarse sand, brown, very stiff, moist, no odor.	ML / SP-SM		95	11/24/29	0.0			
		61.5'-63' Poorly graded sand with silt and gravel (50% sand/40% gravel/10% silt), fine to coarse sand, fine to coarse gravel, gray, very dense, moist, no odor.	SP-SM		90	24/17/16	0.0			
		63'-64.5' Same as above, medium dense, moist to dry, no odor.	SP-SM		75	12/24/24	0.0			
65		64.5'-66' Same as above, hard, moist, no odor.	SP-SM							
70		69'-70.5' Poorly graded sand (100% sand), fine to medium sand, gray-brown, medium dense, moist, trace silt, no odor.	SP		80	1/17/23	1.1			
75		74'-75.5' Same as above, fine sand, dense, no odor.	SP		90	18/21/26	0.1			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-10

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
80		79'-80.5' Same as above, fine to medium sand, very dense, no odor.	SP		80	17/21/31	0.0			
85		84'-85.5' Poorly graded sand (100% sand), medium to coarse sand, dark gray, very dense, moist, no odor.	SP		100	17/29/31	0.0			
90		89'-90.5' Same as above, trace fine gravel.	SP		90	21/36/27	0.1			
95		94'-95' Poorly graded sand (100% sand), medium to coarse sand, dark gray, very dense, moist to wet, no odor.	SP		70	22/50-6"	3.3			Bentonite
		95'-95.5' No recovery.								
100		99'-100.5' Same as above, wet, trace silt, no odor.	SP		100	21/31/36	0.0	MW10-99-041409	X	Sand

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

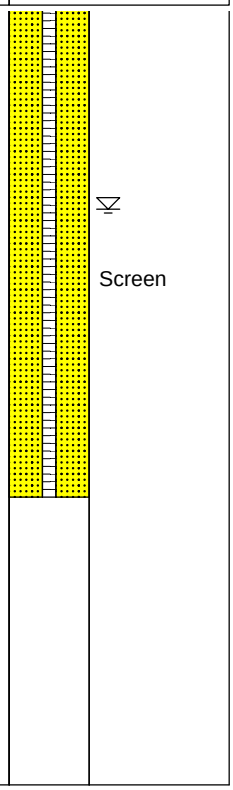
Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-10

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
105		104'-105.5' Poorly graded sand (100% sand), fine to coarse sand, dark gray, very dense, saturated, trace silt, no odor.	SP		60	21/50-6"	0.0			
		105'-105.5' No recovery.								
110										Screen
115										



Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-11

Client: Marty Winn
Project: Whidbey Marine & Auto
Location: Freeland, WA

Farallon PN: 454-001

Logged By: T. Mulhern

Date/Time Started:	4/14/09 1400	**Sampler Type:**	D&M SS 18"x2"
Date/Time Completed:	4/15/09 1200	**Drive Hammer (lbs.):**	300
Equipment:	CME	**Depth of Water ATD (ft bgs):**	104
Drilling Company:	Cascade Drilling	**Total Boring Depth (ft bgs):**	110
Drilling Foreman:	Andy	**Total Well Depth (ft bgs):**	110
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm*)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0-0.3' Aspahalt.	AC							Cap; Concrete
10		9'-10.5' Poorly graded sand with gravel (75% sand/20% gravel/5% silt), fine to medium sand, fine gravel, brown, medium dense, moist, no odor.	SP		90	5/7/9	0.0			Bentonite
15		14'-15.5' Poorly graded sand (95% sand/5% silt), fine sand, gray-brown, medium dense, moist to dry, trace fine gravel, no odor.	SP		90	7/9/9	0.0			
20		19'-19.3' Poorly graded sand (95% sand/5% silt), fine to medium sand, gray-brown, wet, no odor.	SP		100	6/10/11	0.0	MW11-19.5-041409		
		19.3'-20.5' Silt with sand (75% silt/25% sand), brown, very stiff, wet, no odor.	ML							

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-11

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
25		24'-25.5' Poorly graded gravel with sand (60% gravel/40% sand), fine to coarse gravel, fine to coarse sand, gray, medium dense, moist, trace silt, no odor.	GP		90	9/13/14	0.4			
30		29'-30' Poorly graded sand (95% sand/5% silt), fine sand, gray-brown, medium dense, moist, no odor.	SP		95	11/9/11	0.2			
		30'-30.5' Silty sand (80% sand/20% silt), fine sand, gray-brown, medium dense, moist, no odor.	SM							
35		34'-35.5' Poorly graded sand (100% sand), fine sand, gray-brown, medium dense, moist to wet, trace silt, no odor.	SP		80	10/17/20	0.4			
40		39'-40.3' Poorly graded sand with gravel (60% sand/40% gravel), fine to coarse sand, fine to coarse gravel, gray, medium dense, moist, no odor.	SP		95	5/17/17	0.0			
		40.3'-40.5' Silt (100% silt), brown, moist.	ML							
45		44'-45.5' Poorly graded sand (95% sand/5% silt), fine sand, gray, medium dense, moist, no odor.	SP		100	8/12/13	0.0			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-11

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
50		49'-50.5' Same as above, no odor.	SP		90	7/12/13	0.0			
55		54'-55.5' Same as above, no odor.	SP		90	10/12/16	0.0			
		55.5'-57' Same as above, dense, trace silt, cobble.	SP		90	6/15/16	0.0			
		57'-58.5' Same as above, fine to medium sand, dense, trace silt.	SP		100	19/21/30	0.0	MW11-58-041409		
60		58.5'-59.5' Poorly graded sand with gravel (65% sand/30% gravel/5% silt), fine to coarse sand, fine to coarse gravel, gray, very dense, moist, cobbles, no odor.	SP		45	21/50-6"	0.1			
		59.5'-60' No recovery.	GP		90	12/23/23	0.0			
		60'-61.5' Porly graded gravel with sand (60% gravel/45% sand/5% silt), fine to coarse gravel, fine to medium sand, gray, very dense, moist, no odor.	SP		100	12/15/16	0.4			
		61.5'-63' Poorly graded sand (90% sand/10% gravel), fine to coarse sand, fine to coarse gravel, gray, dense, moist, trace silt, no odor.	SP		90	11/23/6	0.0			
65		63'-64.5' Poorly graded sand with gravel (75% sand/25% gravel), fine to coarse sand, fine to coarse gravel, gray, medium dense, moist, trace silt, no odor.	SP		80	21/50-6"	0.0			
		64.5'-65' Poorly graded sand (95% sand/5% silt), moist, no odor.	ML							
		65'-65.3' Gravelly silt (60% silt/30% gravel/10% sand), fine to coarse gravel, hard, moist, no odor.	GP		100	23/35/36	0.0			
		65.3'-65.5' Poorly graded gravel with sand (60% gravel/40% sand), trace silt.	SP		60	50-6"	0.1	MW11-68-041409	X	
		65.5'-66' No recovery.	GP		65	36/50-6"	0.0			
70		66'-67.5' Poorly graded sand (95% sand/5% gravel), fine to coarse sand, fine to coarse gravel, gray, very dense, moist, no dor.	GP							
		67.5'-68' Poorly graded gravel with sand (60% gravel/40% sand), fine to coarse gravel, fine to coarse sand, gray, very dense, moist, cobble stuck in shoe of sampler, no odor.								
		68'-69' No recovery.								
		69'-70' Same as above, cobble stuck in shoe of sampler.								
75		70'-70.5' No recovery.	GP		100	23/26/28	0.0			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-11

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
		74'-74.5' Poorly graded gravel with sand (60% gravel/40% sand), fine to coarse gravel, fine to coarse sand, gray, very dense, moist, no odor.	SP							
		74.5'-75.5' Poorly graded sand (100% sand), fine sand, gray, very dense, moist, trace silt, no odor.								
80		79'-80.5' Same as above, fine to medium sand, medium dense, no odor.	SP		90	23/26/18	0.0			
85		84'-85.5' Pooly graded sand (100% sand), fine to coarse, dark gray, moist, trace fine gravel, no odor.	SP		90	-	0.0			
90		89'-90' Same as above, very dense, no gravel, no odor.	SP		90	21/50-6"	0.0			
		90'-90.5' No recovery.								
95		94'-95.5' Same as above, very dense, no odor.	SP		90	25/36/21	1.9			Bentonite
100		99'-100.5' Same as above, dense, no odor.	SP		70	17/21/26	2.0	MW11-99.5-041509X		Sand

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

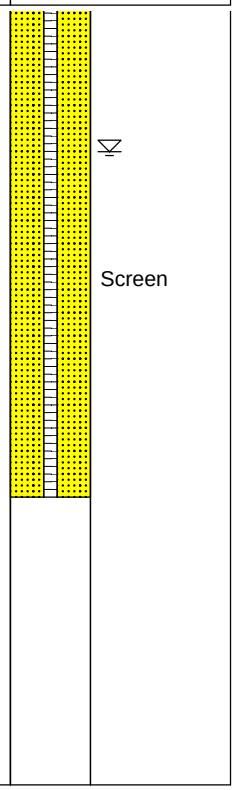
Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-11

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
105		104'-105.5' Same as above, very dense, saturated, trace silt, moderate petroleum like odor.	SP		90	10/16/26	690			
110										
115										



Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-12

Client: Marty Winn
Project: Whidbey Marine & Auto
Location: Freeland, WA

Farallon PN: 454-001

Logged By: T. Mulhern

Date/Time Started:	4/15/09 1230	**Sampler Type:**	D&M SS 18"x2"
Date/Time Completed:	4/15/09 1700	**Drive Hammer (lbs.):**	300
Equipment:	CME	**Depth of Water ATD (ft bgs):**	104
Drilling Company:	Cascade Drilling	**Total Boring Depth (ft bgs):**	110
Drilling Foreman:	Andy	**Total Well Depth (ft bgs):**	110
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm*)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0-0.3' Aspahalt.	AC							Cap; Concrete
10		9'-10.5' Silty sand with gravel (55% sand/30% gravel/15%silt), fine to coarse sand, fine to coarse gravel, brown, medium dense, moist, no odor.	SM		90	7/9/9	0.0			Bentonite
15		14'-15.5' Poorly graded sand (95% sand/5% silt), fine sand, gray-brown, medium dense, moist, no odor.	SP		90	8/10/11	2.4			
20		19'-20.5' Same as above, rust-brown mottling, no odor.	SP		90	7/8/8	3.2			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: X: NA Y: NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-12

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
25		24'-25.5' Same as above, no odor.	SP		100	-	4.1			
30		29'-30.5' Poorly graded sand (95% sand/5% silt), fine to medium sand, gray-brown, medium dense, moist, no odor.	SP		90	5/10/11	5.1			
35		34'-35.5' Same as above, no odor.	SP		95	8/12/13	12.3			
40		39'-40.5' Same as above, dense, becomes fine sand at 40.3', no odor.	SP		90	1/17/18	20.6			
45		44'-44.3' Same as above.	SP		100	4/5/8	649			
		44.3'-45.5' Silt (95% silt/5% sand), gray, stiff, moist to wet, strong petroleum-like odor.	ML					MW12-45-041509	X	

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-12

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
50		49'-50.5' Poorly graded sand (100% sand), fine sand, gray, medium dense, moist, slight petroleum-like odor.	SP		85	8/13/14	29.5			
55		54'-55.5' Same as above, no to slight petroleum-like odor.	SP		90	12/14/15	13.1			
		55.5'-57' Same as above, moderate petroleum-like odor.	SP		85	9/19/20	17.0	MW12-56-041509	X	
		57'-58.5' Same as above, moderate petroleum-like odor.	SP		90	12/14/15	24.1			
		58.5'-60' Same as above, moderate petroleum-like odor.	SP		90	9/10/11	102			
60		60'-61.5' Same as above, moderate petroleum-like odor.	SP		95	8/10/11	46.7			
		61.5'-63' Same as above, trace silt, moderate to strong petroleum-like odor.	SP		95	10/14/15	47.3			
		63'-64.5' Same as above, moderate to strong petroleum-like odor.	SP		90	6/9/10	184			
65		64.5'-65' Same as above, strong petroleum-like odor.	SP		100	6/10/14	1,455	MW12-65-041509	X	
		65'-66' Silt with sand (75% silt/25% sand), fine to coarse sand, gray-brown, hard, moist, strong petroleum-like odor.	ML		100	11/14/21	1,263			
		66'-66.5' Same as above.	ML							
		66.5'-67.5' Poorly graded sand with silt and gravel (50% sand/40% gravel/10% silt), fine to coarse sand, fine to coarse gravel, moist, strong petroleum-like odor.	SP-SM		100	-	1,145			
		67.5'-69' Sandy silt (60% silt/30% sand/10% gravel), fine to coarse sand, fine to coarse gravel, gray, moist, 1 cm thick layers of sand in silt, strong petroleum-like odor.	ML							
70										
75		74'-75.5' Poorly graded sand with gravel (75% sand/20% gravel/5% silt), fine to coarse sand, fine to coarse gravel, gray, very dense,	SP		100	16/26/31	229			

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-12

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
		moist, strong petroleum-like odor.								
80		79'-80.5' Poorly graded sand (100% sand), fine to medium sand, gray, dense, moist, cobble, trace silt, strong petroleum-like odor.	SP		100	14/21/23	251			
85		84'-85.5' Same as above, fine to coarse sand, very dense, strong petroleum-like odor.	SP		100	21/26/27	587	MW12-85-041509	X	
90		89'-90.5' Same as above, moist to wet, strong petroleum-like odor.	SP		70	21/20/27	631			
95		94'-95.5' Same as above, strong petroleum-like odor.	SP		90	15/13/24	1,010			Bentonite
100		99'-100.5' Same as above, fine sand, strong petroleum-like odor.	SP		90	18/25/27	1,101	MW12-99.5-041509	X	Sand

Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

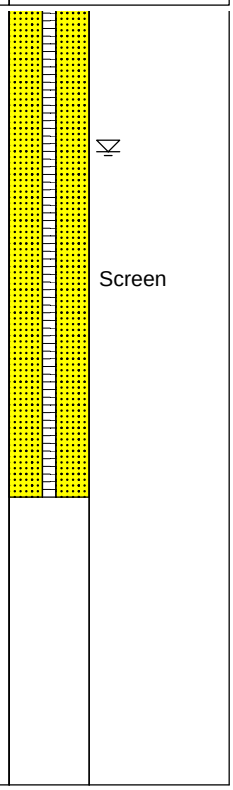
Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: X: NA Y: NA

FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

Log of Boring: MW-12

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Well Construction Details
105		104'-105.5' Same as above, dark gray, saturated, strong petroleum-like odor.	SP		100	-	734			
110										Screen
115										



Well Construction Information

Monument Type: Flush
Casing Diameter (inches): 2
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 100-110

Filter Pack: #2/12 Lapis Lustre
Surface Seal: Concrete
Annular Seal: Bentonite

Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Boring Abandonment: NA
Surveyed Location: **X:** NA **Y:** NA

APPENDIX B
LABORATORY ANALYTICAL REPORTS

CLEANUP ACTION PROGRESS REPORT
MAY 2009
WHIDBEY MARINE & AUTO SUPPLY FACILITY
1689 Main Street
Freeland, Washington

Farallon PN: 454-001

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 11/25/2008
CCIL JOB #: 0811121
DATE RECEIVED: 11/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001 WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 11/19/2008 12:00 INFLUENT-111908
CCIL SAMPLE #: -01

DATA RESULTS

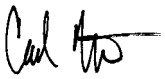
ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	190	UG/L	11/19/2008	DLC
Benzene	EPA-8021	1	UG/L	11/19/2008	DLC
Toluene	EPA-8021	2	UG/L	11/19/2008	DLC
Ethylbenzene	EPA-8021	2	UG/L	11/19/2008	DLC
Xylenes	EPA-8021	11	UG/L	11/19/2008	DLC

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

NOTE: SAMPLE INTEGRATED USING AVIATION GAS CALIBRATION CURVE DUE TO EARLY VOLATILE RANGE PEAKS TYPICAL OF AN AIR MATRIX.

APPROVED BY:



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DATE: 11/25/2008
CCIL JOB #: 0811121
DATE RECEIVED: 11/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001 WHIDBEY MARINE & AUTO

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0811121-01	NWTPH-GX	TFT	120
0811121-01	EPA-8021	TFT	91

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CCIL JOB #: 0811121
DATE RECEIVED: 11/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001 WHIDBEY MARINE & AUTO

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Gas	GA111408	0811121-01	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Gas	GA111408	0811121-01	Benzene	ND(<1)	UG/L
EPA-8021	Gas	GA111408	0811121-01	Toluene	ND(<1)	UG/L
EPA-8021	Gas	GA111408	0811121-01	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Gas	GA111408	0811121-01	Xylenes	ND(<3)	UG/L

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CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001 WHIDBEY MARINE & AUTO

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Gas	GA111408	0811121-01	TPH-Volatile Range	90 %	93 %	3
EPA-8021	Gas	GA111408	0811121-01	Benzene	106 %	112 %	6
EPA-8021	Gas	GA111408	0811121-01	Toluene	105 %	110 %	5
EPA-8021	Gas	GA111408	0811121-01	Ethylbenzene	101 %	106 %	5
EPA-8021	Gas	GA111408	0811121-01	Xylenes	104 %	109 %	5

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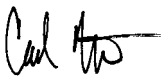

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 1/2/2009
CCIL JOB #: 0812108
DATE RECEIVED: 12/29/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 12/29/2008 13:20 INFLUENT-122908
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	110	UG/L	12/30/2008	DLC
Benzene	EPA-8021	ND(<1)	UG/L	12/30/2008	DLC
Toluene	EPA-8021	2	UG/L	12/30/2008	DLC
Ethylbenzene	EPA-8021	2	UG/L	12/30/2008	DLC
Xylenes	EPA-8021	10	UG/L	12/30/2008	DLC

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** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

NOTE: SAMPLE INTEGRATED USING AVIATION GAS CALIBRATION CURVE DUE TO EARLY VOLATILE RANGE PEAKS TYPICAL OF AN AIR MATRIX.

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CERTIFICATE OF ANALYSIS

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975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 1/2/2009
CCIL JOB #: 0812108
DATE RECEIVED: 12/29/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0812108-01	NWTPH-GX	TFT	113
0812108-01	EPA-8021	TFT	95

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ISSAQUAH, WA 98027

DATE: 1/2/2009
CCIL JOB #: 0812108
DATE RECEIVED: 12/29/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Gas	GA123008	0812108-01	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Gas	GA123008	0812108-01	Benzene	ND(<1)	UG/L
EPA-8021	Gas	GA123008	0812108-01	Toluene	ND(<1)	UG/L
EPA-8021	Gas	GA123008	0812108-01	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Gas	GA123008	0812108-01	Xylenes	ND(<3)	UG/L

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ISSAQUAH, WA 98027

DATE: 1/2/2009
CCIL JOB #: 0812108
DATE RECEIVED: 12/29/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Gas	GA123008	0812108-01	TPH-Volatile Range	96 %	97 %	1
EPA-8021	Gas	GA123008	0812108-01	Benzene	109 %	104 %	5
EPA-8021	Gas	GA123008	0812108-01	Toluene	111 %	106 %	5
EPA-8021	Gas	GA123008	0812108-01	Ethylbenzene	105 %	100 %	5
EPA-8021	Gas	GA123008	0812108-01	Xylenes	111 %	107 %	4

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
1201 CORNWALL AVE. #105
BELLINGHAM, WA 98225

DATE: 1/19/2009
CCIL JOB #: 0901061
DATE RECEIVED: 1/15/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 1/15/2009 13:04 INFLUENT-011509
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	85	UG/L	1/16/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	1/16/2009	DLC
Toluene	EPA-8021	2	UG/L	1/16/2009	DLC
Ethylbenzene	EPA-8021	2	UG/L	1/16/2009	DLC
Xylenes	EPA-8021	8	UG/L	1/16/2009	DLC

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** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

NOTE: SAMPLE INTEGRATED USING AVIATION GAS CALIBRATION CURVE DUE TO EARLY VOLATILE RANGE PEAKS TYPICAL OF AN AIR MATRIX.

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DATE: 1/19/2009
CCIL JOB #: 0901061
DATE RECEIVED: 1/15/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0901061-01	NWTPH-GX	TFT	100
0901061-01	EPA-8021	TFT	95

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DATE: 1/19/2009
CCIL JOB #: 0901061
DATE RECEIVED: 1/15/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Gas	GA011609	0901061-01	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Gas	GA011609	0901061-01	Benzene	ND(<1)	UG/L
EPA-8021	Gas	GA011609	0901061-01	Toluene	ND(<1)	UG/L
EPA-8021	Gas	GA011609	0901061-01	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Gas	GA011609	0901061-01	Xylenes	ND(<3)	UG/L

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DATE: 1/19/2009
CCIL JOB #: 0901061
DATE RECEIVED: 1/15/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Gas	GA011609	0901061-01	TPH-Volatile Range	100 %	95 %	5
EPA-8021	Gas	GA011609	0901061-01	Benzene	108 %	104 %	4
EPA-8021	Gas	GA011609	0901061-01	Toluene	109 %	105 %	4
EPA-8021	Gas	GA011609	0901061-01	Ethylbenzene	102 %	99 %	3
EPA-8021	Gas	GA011609	0901061-01	Xylenes	110 %	105 %	5

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CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 2/18/2009
CCIL JOB #: 0902060
DATE RECEIVED: 2/16/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 2/16/2009 INFLUENT - 021609
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	70	UG/L	2/17/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	2/17/2009	DLC
Toluene	EPA-8021	1	UG/L	2/17/2009	DLC
Ethylbenzene	EPA-8021	1	UG/L	2/17/2009	DLC
Xylenes	EPA-8021	6	UG/L	2/17/2009	DLC

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ISSAQUAH, WA 98027

DATE: 2/18/2009
CCIL JOB #: 0902060
DATE RECEIVED: 2/16/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0902060-01	NWTPH-GX	TFT	103
0902060-01	EPA-8021	TFT	89

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DATE RECEIVED: 2/16/2009
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CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Gas	GA021309	0902060-01	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Gas	GA021309	0902060-01	Benzene	ND(<1)	UG/L
EPA-8021	Gas	GA021309	0902060-01	Toluene	ND(<1)	UG/L
EPA-8021	Gas	GA021309	0902060-01	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Gas	GA021309	0902060-01	Xylenes	ND(<3)	UG/L

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ISSAQUAH, WA 98027

DATE: 2/18/2009
CCIL JOB #: 0902060
DATE RECEIVED: 2/16/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Gas	GA021309	0902060-01	TPH-Volatile Range	83 %	87 %	5
EPA-8021	Gas	GA021309	0902060-01	Benzene	110 %	106 %	4
EPA-8021	Gas	GA021309	0902060-01	Toluene	107 %	103 %	4
EPA-8021	Gas	GA021309	0902060-01	Ethylbenzene	99 %	95 %	4
EPA-8021	Gas	GA021309	0902060-01	Xylenes	105 %	101 %	4

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CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 3/16/2009
CCIL JOB #: 0903054
DATE RECEIVED: 3/11/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 3/10/2009 13:38 INFLUENT-031009
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<50)	UG/L	3/11/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	3/11/2009	DLC
Toluene	EPA-8021	1	UG/L	3/11/2009	DLC
Ethylbenzene	EPA-8021	1	UG/L	3/11/2009	DLC
Xylenes	EPA-8021	5	UG/L	3/11/2009	DLC

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ISSAQUAH, WA 98027

DATE: 3/16/2009
CCIL JOB #: 0903054
DATE RECEIVED: 3/11/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0903054-01	NWTPH-GX	TFT	102
0903054-01	EPA-8021	TFT	89

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DATE: 3/16/2009
CCIL JOB #: 0903054
DATE RECEIVED: 3/11/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Gas	GA031109	0903054-01	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Gas	GA031109	0903054-01	Benzene	ND(<1)	UG/L
EPA-8021	Gas	GA031109	0903054-01	Toluene	ND(<1)	UG/L
EPA-8021	Gas	GA031109	0903054-01	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Gas	GA031109	0903054-01	Xylenes	ND(<3)	UG/L

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 3/16/2009
CCIL JOB #: 0903054
DATE RECEIVED: 3/11/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Gas	GA031109	0903054-01	TPH-Volatile Range	74 %	74 %	0
EPA-8021	Gas	GA031109	0903054-01	Benzene	112 %	110 %	2
EPA-8021	Gas	GA031109	0903054-01	Toluene	110 %	107 %	3
EPA-8021	Gas	GA031109	0903054-01	Ethylbenzene	101 %	100 %	1
EPA-8021	Gas	GA031109	0903054-01	Xylenes	107 %	105 %	2

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 4/13/2009
CCIL JOB #: 0904046
DATE RECEIVED: 4/9/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 4/9/2009 14:18 INFLUENT-040909
CCIL SAMPLE # -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	66	UG/L	4/10/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	4/10/2009	DLC
Toluene	EPA-8021	1	UG/L	4/10/2009	DLC
Ethylbenzene	EPA-8021	1	UG/L	4/10/2009	DLC
Xylenes	EPA-8021	6	UG/L	4/10/2009	DLC

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

NOTE: SAMPLE INTEGRATED USING AVIATION GAS CALIBRATION CURVE DUE TO EARLY VOLATILE RANGE PEAKS TYPICAL OF AN AIR MATRIX.

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CLIENT: FARALLON CONSULTING
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ISSAQUAH, WA 98027

DATE: 4/13/2009
CCIL JOB #: 0904046
DATE RECEIVED: 4/9/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0904046-01	NWTPH-GX	TFT	112
0904046-01	EPA-8021	TFT	96

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DATE: 4/13/2009
CCIL JOB #: 0904046
DATE RECEIVED: 4/9/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Gas	GA040209-01	0904046-01	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Gas	GA040209-01	0904046-01	Benzene	ND(<1)	UG/L
EPA-8021	Gas	GA040209-01	0904046-01	Toluene	ND(<1)	UG/L
EPA-8021	Gas	GA040209-01	0904046-01	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Gas	GA040209-01	0904046-01	Xylenes	ND(<3)	UG/L

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DATE: 4/13/2009
CCIL JOB #: 0904046
DATE RECEIVED: 4/9/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Gas	GA040209-01	0904046-01	TPH-Volatile Range	79 %	76 %	4
EPA-8021	Gas	GA040209-01	0904046-01	Benzene	113 %	107 %	6
EPA-8021	Gas	GA040209-01	0904046-01	Toluene	110 %	104 %	6
EPA-8021	Gas	GA040209-01	0904046-01	Ethylbenzene	101 %	96 %	5
EPA-8021	Gas	GA040209-01	0904046-01	Xylenes	107 %	102 %	5

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
1201 CORNWALL AVE. #105
BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/13/2009 10:20 MW9-62.5-041309
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<3)	MG/KG	4/17/2009	DLC
Benzene	EPA-8021	ND(<0.03)	MG/KG	4/17/2009	DLC
Toluene	EPA-8021	0.1	MG/KG	4/17/2009	DLC
Ethylbenzene	EPA-8021	0.05	MG/KG	4/17/2009	DLC
Xylenes	EPA-8021	0.3	MG/KG	4/17/2009	DLC

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
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BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/13/2009 11:05 MW9-68-041309
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	2600	MG/KG	4/20/2009	DLC
Benzene	EPA-8021	1.4	MG/KG	4/20/2009	DLC
Toluene	EPA-8021	19	MG/KG	4/20/2009	DLC
Ethylbenzene	EPA-8021	19	MG/KG	4/20/2009	DLC
Xylenes	EPA-8021	160	MG/KG	4/20/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY WEATHERED GASOLINE.

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DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/13/2009 12:45 MW9-85-041309
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<3)	MG/KG	4/17/2009	DLC
Benzene	EPA-8021	ND(<0.03)	MG/KG	4/17/2009	DLC
Toluene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Ethylbenzene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Xylenes	EPA-8021	ND(<0.2)	MG/KG	4/17/2009	DLC

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DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/14/2009 9:38 MW10-58-041409
CCIL SAMPLE #: -07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<3)	MG/KG	4/17/2009	DLC
Benzene	EPA-8021	ND(<0.03)	MG/KG	4/17/2009	DLC
Toluene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Ethylbenzene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Xylenes	EPA-8021	ND(<0.2)	MG/KG	4/17/2009	DLC

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CLIENT: FARALLON CONSULTING
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DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/14/2009 11:00 MW10-99-041409
CCIL SAMPLE #: -08

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<3)	MG/KG	4/17/2009	DLC
Benzene	EPA-8021	ND(<0.03)	MG/KG	4/17/2009	DLC
Toluene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Ethylbenzene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Xylenes	EPA-8021	ND(<0.2)	MG/KG	4/17/2009	DLC

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
1201 CORNWALL AVE. #105
BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/14/2009 16:00 MW11-68-041409
CCIL SAMPLE #: -11

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<3)	MG/KG	4/17/2009	DLC
Benzene	EPA-8021	ND(<0.03)	MG/KG	4/17/2009	DLC
Toluene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Ethylbenzene	EPA-8021	ND(<0.05)	MG/KG	4/17/2009	DLC
Xylenes	EPA-8021	ND(<0.2)	MG/KG	4/17/2009	DLC

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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1201 CORNWALL AVE. #105
BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/15/2009 8:40 MW11-99.5-041509
CCIL SAMPLE #: -12

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	3	MG/KG	4/17/2009	DLC
Benzene	EPA-8021	0.06	MG/KG	4/17/2009	DLC
Toluene	EPA-8021	0.3	MG/KG	4/17/2009	DLC
Ethylbenzene	EPA-8021	0.09	MG/KG	4/17/2009	DLC
Xylenes	EPA-8021	0.3	MG/KG	4/17/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY WEATHERED GASOLINE.

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1201 CORNWALL AVE. #105
BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/15/2009 13:10 MW12-45-041509
CCIL SAMPLE #: -13

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	35	MG/KG	4/20/2009	DLC
Benzene	EPA-8021	ND(<0.03)	MG/KG	4/20/2009	DLC
Toluene	EPA-8021	0.9	MG/KG	4/20/2009	DLC
Ethylbenzene	EPA-8021	0.7	MG/KG	4/20/2009	DLC
Xylenes	EPA-8021	4.1	MG/KG	4/20/2009	DLC
TPH-Diesel Range	NWTPH-DX	ND(<25)	MG/KG	4/17/2009	EBS
TPH-Oil Range	NWTPH-DX	ND(<50)	MG/KG	4/17/2009	EBS

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

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DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/15/2009 13:15 MW12-56-041509
CCIL SAMPLE #: -14

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	10	MG/KG	4/20/2009	DLC
Benzene	EPA-8021	ND(<0.03)	MG/KG	4/20/2009	DLC
Toluene	EPA-8021	ND(<0.05)	MG/KG	4/20/2009	DLC
Ethylbenzene	EPA-8021	0.06	MG/KG	4/20/2009	DLC
Xylenes	EPA-8021	0.3	MG/KG	4/20/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY HIGHLY WEATHERED GASOLINE.

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DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/15/2009 13:40 MW12-65-041509
CCIL SAMPLE #: -15

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	990	MG/KG	4/21/2009	DLC
Benzene	EPA-8021	ND(<0.3)	MG/KG	4/20/2009	DLC
Toluene	EPA-8021	3.7	MG/KG	4/20/2009	DLC
Ethylbenzene	EPA-8021	12	MG/KG	4/20/2009	DLC
Xylenes	EPA-8021	69	MG/KG	4/20/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY EXTREMELY WEATHERED GASOLINE.

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BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/15/2009 13:50 MW12-85-041509
CCIL SAMPLE #: -16

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<1700)*	MG/KG	4/20/2009	DLC
Benzene	EPA-8021	ND(<0.3)	MG/KG	4/18/2009	DLC
Toluene	EPA-8021	ND(<0.5)	MG/KG	4/18/2009	DLC
Ethylbenzene	EPA-8021	0.6	MG/KG	4/18/2009	DLC
Xylenes	EPA-8021	5.1	MG/KG	4/18/2009	DLC
TPH-Diesel Range	NWTPH-DX	1300	MG/KG	5/1/2009	EBS
TPH-Oil Range	NWTPH-DX	ND(<50)	MG/KG	5/1/2009	EBS

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY DIESEL #1 AND DIESEL FUEL. NWTPH-DX ANALYZED OUTSIDE OF HOLD TIME.

* REPORTING LIMIT RAISED DUE TO SEMIVOLATILE RANGE PRODUCT OVERLAP.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO
CLIENT SAMPLE ID: 4/15/2009 14:00 MW12-99.5-041509
CCIL SAMPLE #: -17

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	2800	MG/KG	4/20/2009	DLC
Benzene	EPA-8021	ND(<0.6)	MG/KG	4/18/2009	DLC
Toluene	EPA-8021	4.8	MG/KG	4/18/2009	DLC
Ethylbenzene	EPA-8021	22	MG/KG	4/18/2009	DLC
Xylenes	EPA-8021	150	MG/KG	4/18/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY EXTREMELY WEATHERED GASOLINE.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CCI
ANALYTICAL
LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
1201 CORNWALL AVE. #105
BELLINGHAM, WA 98225

DATE: 5/4/2009
CCIL JOB #: 0904079
DATE RECEIVED: 4/17/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0904079-02	NWTPH-GX	TFT	90
0904079-02	EPA-8021	TFT	86
0904079-04	NWTPH-GX	TFT	*
0904079-04	EPA-8021	TFT	*
0904079-05	NWTPH-GX	TFT	98
0904079-05	EPA-8021	TFT	86
0904079-07	NWTPH-GX	TFT	76
0904079-07	EPA-8021	TFT	74
0904079-08	NWTPH-GX	TFT	91
0904079-08	EPA-8021	TFT	79
0904079-11	NWTPH-GX	TFT	93
0904079-11	EPA-8021	TFT	78
0904079-12	NWTPH-GX	TFT	104
0904079-12	EPA-8021	TFT	90
0904079-13	NWTPH-GX	TFT	98
0904079-13	EPA-8021	TFT	93
0904079-13	NWTPH-DX	C25	77
0904079-14	NWTPH-GX	TFT	110
0904079-14	EPA-8021	TFT	98
0904079-15	NWTPH-GX	TFT	*
0904079-15	EPA-8021	TFT	*
0904079-16	NWTPH-GX	TFT	*
0904079-16	EPA-8021	TFT	*
0904079-16	NWTPH-DX	C25	106
0904079-17	NWTPH-GX	TFT	*
0904079-17	EPA-8021	TFT	*

* SURROGATE DILUTED OUT OF CALIBRATION RANGE.

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CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Soil	GS041709	0904079-02 to 17	TPH-Volatile Range	ND(<3)	MG/KG
EPA-8021	Soil	GS041709	0904079-02 to 17	Benzene	ND(<0.03)	MG/KG
EPA-8021	Soil	GS041709	0904079-02 to 17	Toluene	ND(<0.05)	MG/KG
EPA-8021	Soil	GS041709	0904079-02 to 17	Ethylbenzene	ND(<0.05)	MG/KG
EPA-8021	Soil	GS041709	0904079-02 to 17	Xylenes	ND(<0.2)	MG/KG
NWTPH-DX	Soil	DS041609	0904079-13	TPH-Diesel Range	ND(<25)	MG/KG
NWTPH-DX	Soil	DS041609	0904079-13	TPH-Oil Range	ND(<50)	MG/KG
NWTPH-DX	Soil	DS042809	0904079-16	TPH-Diesel Range	ND(<25)	MG/KG
NWTPH-DX	Soil	DS042809	0904079-16	TPH-Oil Range	ND(<50)	MG/KG

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CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001/WHIDBEY MARINE & AUTO

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Soil	GS041709	0904079-02 to 17	TPH-Volatile Range	78 %	87 %	11
EPA-8021	Soil	GS041709	0904079-02 to 17	Benzene	103 %	95 %	8
EPA-8021	Soil	GS041709	0904079-02 to 17	Toluene	107 %	99 %	8
EPA-8021	Soil	GS041709	0904079-02 to 17	Ethylbenzene	100 %	92 %	8
EPA-8021	Soil	GS041709	0904079-02 to 17	Xylenes	105 %	97 %	8
NWTPH-DX	Soil	DS041609	0904079-13	TPH-Diesel Range	96 %	96 %	0
NWTPH-DX	Soil	DS042809	0904079-16	TPH-Diesel Range	92 %	93 %	1

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ALS Laboratory Group
ANALYTICAL CHEMISTRY AND TESTING SERVICES

CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 5/18/2009
CCIL JOB #: 0905045
DATE RECEIVED: 5/12/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/12/2009 14:35 INFLUENT-051209
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	71	UG/L	5/13/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	5/13/2009	DLC
Toluene	EPA-8021	1	UG/L	5/13/2009	DLC
Ethylbenzene	EPA-8021	1	UG/L	5/13/2009	DLC
Xylenes	EPA-8021	6	UG/L	5/13/2009	DLC

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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NOTE: SAMPLE INTEGRATED USING AVIATION GAS CALIBRATION CURVE DUE TO EARLY VOLATILE RANGE PEAKS TYPICAL OF AN AIR MATRIX.

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DATE: 5/18/2009
CCIL JOB #: 0905045
DATE RECEIVED: 5/12/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	% RECV
0905045-01	NWTPH-GX	TFT	114
0905045-01	EPA-8021	TFT	98

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DATE: 5/18/2009
CCIL JOB #: 0905045
DATE RECEIVED: 5/12/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Gas	GA051309	0905045-01	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Gas	GA051309	0905045-01	Benzene	ND(<1)	UG/L
EPA-8021	Gas	GA051309	0905045-01	Toluene	ND(<1)	UG/L
EPA-8021	Gas	GA051309	0905045-01	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Gas	GA051309	0905045-01	Xylenes	ND(<3)	UG/L

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DATE: 5/18/2009
CCIL JOB #: 0905045
DATE RECEIVED: 5/12/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Gas	GA051309	0905045-01	TPH-Volatile Range	79 %	80 %	1
EPA-8021	Gas	GA051309	0905045-01	Benzene	110 %	104 %	6
EPA-8021	Gas	GA051309	0905045-01	Toluene	107 %	101 %	6
EPA-8021	Gas	GA051309	0905045-01	Ethylbenzene	102 %	96 %	6
EPA-8021	Gas	GA051309	0905045-01	Xylenes	107 %	101 %	6

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CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/14/2009 9:20 MW1-051409
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<50)	UG/L	5/14/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	5/14/2009	DLC
Toluene	EPA-8021	ND(<1)	UG/L	5/14/2009	DLC
Ethylbenzene	EPA-8021	ND(<1)	UG/L	5/14/2009	DLC
Xylenes	EPA-8021	ND(<3)	UG/L	5/14/2009	DLC

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ISSAQUAH, WA 98027

DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/13/2009 16:28 MW2-051309
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	4300	UG/L	5/15/2009	DLC
Benzene	EPA-8021	ND(<5)	UG/L	5/15/2009	DLC
Toluene	EPA-8021	380	UG/L	5/15/2009	DLC
Ethylbenzene	EPA-8021	130	UG/L	5/15/2009	DLC
Xylenes	EPA-8021	1100	UG/L	5/15/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

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CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/14/2009 10:30 MW3-051409
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<50)	UG/L	5/15/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	5/15/2009	DLC
Toluene	EPA-8021	ND(<1)	UG/L	5/15/2009	DLC
Ethylbenzene	EPA-8021	ND(<1)	UG/L	5/15/2009	DLC
Xylenes	EPA-8021	ND(<3)	UG/L	5/15/2009	DLC

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ALS Laboratory Group
ANALYTICAL CHEMISTRY AND TESTING SERVICES

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CLIENT: FARALLON CONSULTING
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ISSAQUAH, WA 98027

DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/14/2009 8:18 MW4-051409
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	83000	UG/L	5/15/2009	DLC
Benzene	EPA-8021	ND(<50)	UG/L	5/15/2009	DLC
Toluene	EPA-8021	30000	UG/L	5/15/2009	DLC
Ethylbenzene	EPA-8021	1100	UG/L	5/15/2009	DLC
Xylenes	EPA-8021	6600	UG/L	5/15/2009	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	680**	UG/L	5/14/2009	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND(<250)	UG/L	5/14/2009	EBS

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY LIGHTLY WEATHERED GASOLINE AND WEATHERED DIESEL FUEL .

* RESULT BIASED HIGH DUE TO VOLATILE RANGE PRODUCT OVERLAP.

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DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/14/2009 11:32 MW6-051409
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	17000	UG/L	5/15/2009	DLC
Benzene	EPA-8021	29	UG/L	5/15/2009	DLC
Toluene	EPA-8021	3200	UG/L	5/15/2009	DLC
Ethylbenzene	EPA-8021	250	UG/L	5/15/2009	DLC
Xylenes	EPA-8021	3100	UG/L	5/15/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

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ISSAQUAH, WA 98027

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DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/14/2009 11:10 MW7-051409
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	13000	UG/L	5/15/2009	DLC
Benzene	EPA-8021	2500	UG/L	5/15/2009	DLC
Toluene	EPA-8021	3700	UG/L	5/15/2009	DLC
Ethylbenzene	EPA-8021	180	UG/L	5/15/2009	DLC
Xylenes	EPA-8021	1700	UG/L	5/15/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

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CERTIFICATE OF ANALYSIS

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975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/13/2009 15:50 MW8-051309
CCIL SAMPLE #: -07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	60000	UG/L	5/18/2009	DLC
Benzene	EPA-8021	ND(<50)	UG/L	5/18/2009	DLC
Toluene	EPA-8021	9000	UG/L	5/18/2009	DLC
Ethylbenzene	EPA-8021	1800	UG/L	5/18/2009	DLC
Xylenes	EPA-8021	9500	UG/L	5/18/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

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DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/13/2009 14:55 MW9-051309
CCIL SAMPLE #: -08

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	94000	UG/L	5/18/2009	DLC
Benzene	EPA-8021	18000	UG/L	5/18/2009	DLC
Toluene	EPA-8021	32000	UG/L	5/18/2009	DLC
Ethylbenzene	EPA-8021	1500	UG/L	5/18/2009	DLC
Xylenes	EPA-8021	7600	UG/L	5/18/2009	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	800*	UG/L	5/14/2009	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND(<250)	UG/L	5/14/2009	EBS

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY LIGHTLY WEATHERED GASOLINE AND WEATHERED DIESEL FUEL.

* RESULT BIASED HIGH DUE TO VOLATILE RANGE PRODUCT OVERLAP.

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DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/13/2009 12:35 MW10-051309
CCIL SAMPLE #: -09

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND(<50)	UG/L	5/18/2009	DLC
Benzene	EPA-8021	ND(<1)	UG/L	5/18/2009	DLC
Toluene	EPA-8021	2	UG/L	5/18/2009	DLC
Ethylbenzene	EPA-8021	ND(<1)	UG/L	5/18/2009	DLC
Xylenes	EPA-8021	ND(<3)	UG/L	5/18/2009	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND(<130)	UG/L	5/14/2009	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND(<250)	UG/L	5/14/2009	EBS

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

ALS Laboratory Group
ANALYTICAL CHEMISTRY AND TESTING SERVICES

CERTIFICATE OF ANALYSIS

CLIENT: FARALLON CONSULTING
975 5th AVE. NW SUITE 100
ISSAQUAH, WA 98027

DATE: 5/19/2009
ALS JOB #: 0905056
DATE RECEIVED: 5/14/2009
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/13/2009 14:05 MW11-051309
CCIL SAMPLE #: -10

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	2300	UG/L	5/15/2009	DLC
Benzene	EPA-8021	500	UG/L	5/15/2009	DLC
Toluene	EPA-8021	530	UG/L	5/15/2009	DLC
Ethylbenzene	EPA-8021	19	UG/L	5/15/2009	DLC
Xylenes	EPA-8021	230	UG/L	5/15/2009	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND(<130)	UG/L	5/14/2009	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND(<250)	UG/L	5/14/2009	EBS

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

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DATE: 5/19/2009
ALS JOB #: 0905056
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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/13/2009 11:10 MW12-051309
CCIL SAMPLE #: -11

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	55000	UG/L	5/15/2009	DLC
Benzene	EPA-8021	200	UG/L	5/15/2009	DLC
Toluene	EPA-8021	8900	UG/L	5/15/2009	DLC
Ethylbenzene	EPA-8021	1700	UG/L	5/15/2009	DLC
Xylenes	EPA-8021	9700	UG/L	5/15/2009	DLC
TPH-Diesel Range	NWTPH-DX W/CLEANUP	ND(<1300)*	UG/L	5/14/2009	EBS
TPH-Oil Range	NWTPH-DX W/CLEANUP	ND(<250)	UG/L	5/14/2009	EBS

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

* REPORTING LIMIT RAISED DUE TO VOLATILE RANGE PRODUCT OVERLAP.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001
CLIENT SAMPLE ID: 5/13/2009 12:00 QA/QC-051309
CCIL SAMPLE #: -12

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	57000	UG/L	5/18/2009	DLC
Benzene	EPA-8021	ND(<50)	UG/L	5/18/2009	DLC
Toluene	EPA-8021	8900	UG/L	5/18/2009	DLC
Ethylbenzene	EPA-8021	1700	UG/L	5/18/2009	DLC
Xylenes	EPA-8021	9400	UG/L	5/18/2009	DLC

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LIGHTLY WEATHERED GASOLINE.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: PAUL GRABAU
CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID		METHOD	SUR ID	% RECV
0905056-01		NWTPH-GX	TFT	88
0905056-01		EPA-8021	TFT	89
0905056-02		NWTPH-GX	TFT	103
0905056-02		EPA-8021	TFT	105
0905056-03		NWTPH-GX	TFT	86
0905056-03		EPA-8021	TFT	91
0905056-04		NWTPH-GX	TFT	102
0905056-04		EPA-8021	TFT	108
0905056-04		NWTPH-DX W/CLEANUP	C25	*
0905056-04	DILUTION	EPA-8021	TFT	93
0905056-05		NWTPH-GX	TFT	98
0905056-05		EPA-8021	TFT	104
0905056-06		NWTPH-GX	TFT	94
0905056-06		EPA-8021	TFT	98
0905056-07		NWTPH-GX	TFT	97
0905056-07		EPA-8021	TFT	102
0905056-08		NWTPH-GX	TFT	86
0905056-08		EPA-8021	TFT	90
0905056-08		NWTPH-DX W/CLEANUP	C25	117
0905056-09		NWTPH-GX	TFT	93
0905056-09		EPA-8021	TFT	94
0905056-09		NWTPH-DX W/CLEANUP	C25	100
0905056-10		NWTPH-GX	TFT	95
0905056-10		EPA-8021	TFT	92
0905056-10		NWTPH-DX W/CLEANUP	C25	89
0905056-11		NWTPH-GX	TFT	93
0905056-11		EPA-8021	TFT	96
0905056-11		NWTPH-DX W/CLEANUP	C25	90
0905056-12		NWTPH-GX	TFT	98
0905056-12		EPA-8021	TFT	103

* SURROGATE HIGH DUE TO COELUTING COMPOUNDS.

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CLIENT PROJECT ID: 454-001

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	RESULT	UNITS
NWTPH-GX	Water	GW051409	0905056-01 to 12	TPH-Volatile Range	ND(<50)	UG/L
EPA-8021	Water	GW051409	0905056-01 to 12	Benzene	ND(<1)	UG/L
EPA-8021	Water	GW051409	0905056-01 to 12	Toluene	ND(<1)	UG/L
EPA-8021	Water	GW051409	0905056-01 to 12	Ethylbenzene	ND(<1)	UG/L
EPA-8021	Water	GW051409	0905056-01 to 12	Xylenes	ND(<3)	UG/L
NWTPH-DX	Water	DW050709	0905056-04,08-11	TPH-Diesel Range	ND(<130)	UG/L
NWTPH-DX	Water	DW050709	0905056-04,08-11	TPH-Oil Range	ND(<250)	UG/L

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QUALITY CONTROL RESULTS

BLANK SPIKE/BLANK SPIKE DUPLICATE RESULTS

METHOD	MATRIX	QC BATCH ID	ASSOCIATED SAMPLES	ANALYTE	BLANK SPIKE RECOVERY	BLANK SPIKE DUP RECOVERY	RPD
NWTPH-GX	Water	GW051409	0905056-01 to 12	TPH-Volatile Range	75 %	80 %	7
EPA-8021	Water	GW051409	0905056-01 to 12	Benzene	91 %	93 %	2
EPA-8021	Water	GW051409	0905056-01 to 12	Toluene	90 %	92 %	2
EPA-8021	Water	GW051409	0905056-01 to 12	Ethylbenzene	89 %	92 %	3
EPA-8021	Water	GW051409	0905056-01 to 12	Xylenes	88 %	92 %	4
NWTPH-DX	Water	DW050709	0905056-04,08-11	TPH-Diesel Range	97 %	89 %	9

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