

ADDITIONAL SUBSURFACE INVESTIGATION AND FEASIBILITY TESTING REPORT

TCP ID#NW1243

**FORMER CITY HAND LAUNDRY PROPERTY
1002 4TH STREET
BREMERTON, WASHINGTON**

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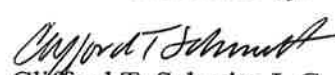
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ACRONYMS AND ABBREVIATIONS

AS	air sparge
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
cis-1,2-DCE	cis-1,2-dichloroethene
DRO	diesel-range organics
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
Farallon	Farallon Consulting, L.L.C.
foc	fraction organic carbon
g/kg	grams per kilogram
GRO	gasoline-range organics
HVOCs	halogenated volatile organic compounds
IOW	inches of water
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
ORO	oil-range organics
ORP	oxidation-reduction potential
PCE	tetrachloroethene
PID	photoionization detector
PQLs	practical quantitation limits
PVC	polyvinyl chloride
scfm	standard cubic feet per minute



SECOR

SECOR International Incorporated

Site Former City Hand Laundry Property, 1002 4th Street, Bremerton, Washington and all areas where contamination originating from releases from the property have been confirmed

SOD soil oxidant demand

SVE soil vapor extraction

TCE trichloroethene

TPH total petroleum hydrocarbons

µg/l micrograms per liter

USTs underground storage tanks

WAC 173-340 Chapter 173-340 of the Washington Administrative Code

Work Plan Work Plan, Additional Subsurface Investigation and Air Sparging Pilot Test, dated April 16, 2004, prepared by Farallon.



EXECUTIVE SUMMARY

Farallon Consulting, L.L.C. (Farallon) has prepared this report to document the results of the additional subsurface investigation work, air sparge (AS) pilot testing, and preliminary screening of oxidant-based remedial technologies as a component of a future cleanup action. This work was conducted at the Former City Hand Laundry Property, located at 1002 4th Street in Bremerton, Washington and adjacent properties where hazardous substances have been identified in soil and/or groundwater (herein referred to as the Site).

The purposes of the additional subsurface investigation were to further assess the lateral and vertical distribution of tetrachloroethene (PCE) in groundwater at the Former City hand Laundry Property, to confirm whether concentrations of PCE were present in soil and/or groundwater off Site; and also assess the potential presence of total petroleum hydrocarbons (TPH) in soil and groundwater. The purpose of the AS pilot testing was to evaluate whether AS will be a technically feasible remedial alternative for cleanup of groundwater at the Former City Hand Laundry Property. A preliminary screening of the potential for application of chemical oxidants and/or ozone was performed to evaluate whether oxidation technologies will be retained for further consideration as a potential feasible remediation alternative.

The work completed included: installation of seven monitoring wells, MW-4 through MW-10, to depths of 55 to 60 feet below the ground surface (bgs); installation of two AS pilot test wells, AS-1, and MW-1D, to a depth of approximately 80 feet bgs; installation of boring B-1 near the former location of the underground storage tank used for gasoline and diesel storage; submittal of select soil samples for laboratory analysis of PCE and associated degradation compounds as well as TPH as gasoline-range organics (GRO), diesel-range organics (DRO), oil-range organics (ORO), benzene, toluene, ethylbenzene and xylenes (BTEX), and fraction organic carbon (foc); completion of an AS feasibility pilot test; and completion of a bench-scale test to assess the potential for application of oxidant-based remedial alternatives.

The results of the soil sampling and analytical testing for petroleum hydrocarbons indicated that concentrations of GRO, DRO, ORO, and BTEX were below the laboratory practical quantitation limits (PQLs) for all soil samples but one. A single soil sample from boring B-1 contained a low concentration of GRO that was attributed to contribution from PCE present in the sample rather than GRO. Petroleum hydrocarbons as GRO, DRO, ORO, and BTEX were not detected at concentrations above the laboratory PQLs in any of the groundwater samples collected. Petroleum hydrocarbons will no longer be considered a constituent of potential concern for the Site based on the soil and groundwater results.

The results of the soil sampling and analytical testing for PCE and its degradation compounds indicated that concentrations of PCE exceeding the Washington State Department of Ecology (Ecology) Model Toxics Control Act Cleanup Regulation (MTCA) Method A cleanup level of 0.05 milligrams per kilogram at every boring where vadose zone soil samples were collected. Concentrations of PCE decreased significantly with depth. The vertical distribution of soil contamination has been adequately defined at the Site; however, the lateral distribution of PCE-



contamination in vadose zone soil has not been defined by the results of this investigation. The proposed application of soil vapor extraction (SVE) technology at the Site would address the PCE present in the vadose zone at the Former City Hand Laundry Property and areas immediately surrounding the property. No further investigation of the lateral distribution of the PCE and/or its degradation compounds in soil is necessary to proceed with selection and design of a remedial alternative for soil.

During this investigation, the highest concentrations of PCE in soil were detected at boring location MW-8, located northeast of the Former City Hand Laundry Property, near the southeast corner of the north adjacent church, where no known potential source of a PCE release exists. Farallon considered several potential scenarios to account for a release of PCE to the subsurface close to boring MW-8, including disposal to the ground surface, or releases from the sanitary sewer or storm drain system. Aerial photographs of the property reviewed by Farallon did not show obvious doors on the north side of the former building from which PCE or PCE-laden wastewater could have been dumped into the alley and flowed into the ground. The suspected location of the former side sewer connection for the building is on the southern portion of the property based on the configuration of the former drain piping in the former building and the City of Bremerton sanitary sewer main locations. Further the stormwater system that crosses to the north into the alley was not present prior to conversion of the property to a parking lot. The absence of any known underground piping that extends to the north limits the possibility of preferential transport of a PCE release via a utility corridor. The lateral distribution of contaminated soil to the north was not defined by this investigation nor has the origin of the contamination in this area been identified.

The laboratory analytical results of soil samples collected from depths of 50 to 55.5 feet bgs during the additional subsurface investigation indicate that the foc values in the saturated soil were below 0.0011 grams per gram. The foc is negligible, indicating that the sorptive capacity of the soil in the upper portion of the water-bearing zone is low. A low sorptive capacity means that retardation of certain contaminants such as PCE and TCE in the saturated zone will be minimal and contaminants will move only slightly slower than the groundwater velocity.

The calculated groundwater flow direction for the June 2005 monitoring and sampling event indicates that the groundwater flows is generally towards the southeast. The groundwater flow direction is different than what was expected based on previous investigation data, which had consistently indicated an easterly flow direction.

The water-bearing zone is continuous from the first encountered groundwater to the total depth of 80 feet bgs explored at the Site. There are no indications in the observed subsurface lithology of any continuous layers of lower-permeability soil that could act as an aquiclude or aquitard to the transport of groundwater. The thickness of the water-bearing zone is currently not known.

The groundwater elevation measurements for monitoring well pairs screened in the upper and lower portions of the water-bearing zone indicate that there is a downward vertical groundwater gradient from the upper portion of the water-bearing zone to the lower portion of the water-bearing zone. This means that contaminants in the upper portion of the water-bearing zone may be transported downward via the vertical gradient.



The results of groundwater monitoring and sampling in June 2005 indicate that the concentrations of PCE exceeding the MTCA Method A cleanup level were present at all of the monitoring well locations. Therefore, neither the lateral nor vertical distribution of PCE has been defined in groundwater. However, concentrations of PCE in groundwater decrease over an order of magnitude between wells screened near the top of the water-bearing zone and the interval screened by deep wells AS-1 and MW-10, which suggests that concentrations of PCE decrease below the MTCA Method A cleanup level slightly deeper than these wells are screened.

The results of the AS feasibility testing indicate that AS is a feasible remedial alternative for the remediation of PCE in groundwater at the Site within the vicinity of the Former City Hand Laundry Property boundaries and a limited distance around the property. AS is a complimentary technology used in conjunction with SVE, which had previously been demonstrated to be a technically feasible remedial alternative during a previous phase of work by Farallon. The results of the bench-scale chemical oxidation pilot testing for the application of oxidant-based technologies such as injection of liquid chemical oxidants or ozone gas, indicated that these technologies should be retained for further investigation via field-scale pilot testing. Application of chemical oxidants has the potential to treat PCE-contaminated groundwater that is beyond the practical treatment limits of AS and SVE technologies off the property. Application of ozone-based technologies may also be used to compliment AS and increase the rate of cleanup if AS alone has a limited affect.

The results of the investigation indicate that the Site boundaries have not been defined by the existing monitoring well network and extend beyond the limits of MW-4, MW-5, MW-6, MW-7, MW-8, and MW-10. Ecology will require that the Site boundaries be defined, which will likely require a combination of additional subsurface investigation and modeling to refine the understanding of the lateral and vertical distribution of the PCE in soil and/or groundwater.

Farallon proposes to install an AS/SVE system at the former City Hand Laundry Property as an interim remedial action to eliminate the source(s) of PCE in the subsurface and mitigate ongoing migration of PCE off of the Former City Hand Laundry Property. This interim remedial action will likely be incorporated into the final cleanup action plan for the Site. Farallon also proposes to further investigate the potential for application of chemical oxidants to treat select areas off-property. A field-scale pilot test will be proposed and would be conducted during the installation of the AS/SVE system. Farallon would also conduct another phase of investigation to refine the understanding of the lateral and vertical distribution of PCE off of the Former City Hand Laundry Property and better define the Site boundaries as required by Ecology under MTCA. The next phase of investigation should provide sufficient information on the potential distribution of PCE to meet the requirements under MTCA and proceed with the final cleanup action. A work plan describing the proposed work is forthcoming.



1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this report to document the results of the additional subsurface investigation work, air sparge (AS) pilot testing, and preliminary screening of oxidant-based remedial technologies as a component of a future cleanup action. This work was conducted at the Former City Hand Laundry Property, located at 1002 4th Street in Bremerton, Washington and adjacent properties where hazardous substances have been identified in soil and/or groundwater (herein referred to as the Site) (Figure 1). The work was conducted in accordance with the substantive requirements of the Washington State Department of Ecology (Ecology) Model Toxics Control Act Cleanup Regulation (MTCA), as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340).

1.1 PURPOSE

Previous investigations have identified concentrations of tetrachloroethene (PCE) in soil and groundwater attributable to the former operation of a dry cleaning and laundry facility at the Former City Hand Laundry Property. The purposes of the additional subsurface investigation were to further assess the lateral and vertical distribution of PCE in groundwater at the Former City Hand Laundry Property, to confirm whether concentrations of PCE were present in soil and/or groundwater off Site; and also assess the potential presence of total petroleum hydrocarbons (TPH) in soil and groundwater. The purpose of the AS pilot testing was to evaluate whether AS will be a technically feasible remedial alternative for cleanup of groundwater at the Former City Hand Laundry Property. A preliminary screening of the potential for application of chemical oxidants and/or ozone was performed to evaluate whether a field-scale pilot test was warranted in the future, and whether oxidation technologies will be retained for further consideration as a potential feasible remediation alternative.

The scope of work was described in the *Work Plan Additional Subsurface Investigation and Air Sparging Pilot Testing*, prepared by Farallon and dated April 16, 2004 (Work Plan, Farallon 2004b). Ecology reviewed the Work Plan and provided comments in the *Request for Review and Opinion Letter, Former City Hand Laundry*, dated September 20, 2004 (Ecology 2004). The scope of work was modified per Ecology's comments and the changes were presented in the *Response to Request for Review and Opinion Letter*, prepared by Farallon and submitted to Ecology for review on March 14, 2005 (Farallon 2004c). Farallon received Ecology's verbal concurrence with the scope of work on March 29, 2005 (Ecology 2005).

1.2 ORGANIZATION

This report has been prepared to meet the documentation requirements for a groundwater investigation under the Model Toxics Control Act Cleanup Regulation (MTCA), specifically Section 840 of Chapter 173-340 of the Washington Administrative Code (WAC 173-340-840). The report has been organized into the following sections:

- **Section 2 – Background.** This section provides a description of the Site features, location, and environmental setting; a summary of historical Site use; and a summary of



previous environmental investigations conducted at the Site. The environmental setting includes a summary of the geology, hydrogeology, and historical land use pertaining to the Site. The summary of previous investigations includes work conducted by Farallon and others.

- **Section 3 – Field Program.** This section provides a description of the subsurface investigation activities, including drilling and sampling protocols. Also included in this section is a description of the monitoring well development, sampling program, AS pilot test procedures, and bench-scale chemical pilot testing program.
- **Section 4 –Results.** This section presents the results of the subsurface investigation, including details of the drilling activities, soil sampling results, and groundwater monitoring results. Also included in this section are the results of the AS pilot test and bench-scale chemical oxidation pilot test.
- **Section 5 – Conclusions.** This section presents Farallon's conclusions regarding the results of the subsurface investigation, the AS pilot test, and bench-scale chemical oxidation pilot test.
- **Section 6 – Data Gaps and Planned Work.** This section presents a brief summary of the work to be performed, based on the results of the phase of work herein and the previous investigations.
- **Section 7 – References.** This section presents a list of the documents cited in this report.
- **Section 8 – Limitations.** This section presents Farallon's standard limitations associated with completion of the subsurface investigation, pilot testing, and preparation of this report.



2.0 BACKGROUND

The Site is located in Bremerton, Washington, in the vicinity of the intersection of Warren Avenue and 4th Street (Figure 1). The Former City Hand Laundry Property is located at the northwest corner of the intersection (Figure 2). The Former City Hand Laundry Property is currently an asphalt-paved parking lot for the Bremerton Christian Center, which is located immediately north of the parking lot. The Former City Hand Laundry Property includes two parking areas, eastern and western, which are divided by a planter strip located in the central portion of the property. An underground electric line that supplies power to the lighting system in the parking area is located beneath the planter strip divider.

The surrounding properties include the following: residences to the west; a concrete-paved alley, residences, and the Bremerton Christian Center to the north; Warren Avenue and the Land Title Building to the east; and 4th Street, a church, and a parking lot to the south. The general topography of the area slopes to the east, toward the Land Title Building and Puget Sound beyond. The topography of the Former City Hand Laundry Property slopes toward the north to an existing catch basin in the northeast quadrant of the eastern parking area.

A laundry and dry cleaning establishment occupied the Former City Hand Laundry Property from approximately 1940 to 1985. Background information provided to Farallon included a schematic site plan showing the approximate location of a Stoddard solvent dry cleaning machine, two locations for PCE-based dry cleaning machines, a dry cleaning machine sump and associated drain lines, a heating oil tank for a former boiler, and two former underground storage tanks (USTs) that were used for storage of gasoline, and later, diesel fuel, for City Hand Laundry vehicle use (Farallon 2004a). All former site improvements have been removed, but are depicted on Figure 2. The historic information was used to select the boring locations for investigations conducted by SECOR International Incorporated (SECOR) in May 1998, and by Farallon in September 1999 (SECOR 1998, Farallon 1999).

Aerial photographs of the Site vicinity were reviewed during the additional subsurface investigation to provide additional details on the Former City Hand Laundry Property layout and building features. Walker and Associates of Seattle, Washington provided aerial photographs dated April 6, 1977 and March 13, 1985. Copies of the aerial photographs are included in Appendix D.

The aerial photographs show that the former City Hand Laundry building was located on the eastern two-thirds of the property and extended from the north property line to the south property line. The western one-third of the property was used for parking. The arrangement of vehicles outside of the building in both aerial photographs suggests that the entrance to the building likely was located on the southwest corner of the building. Large delivery-type trucks are present on the 1985 aerial photograph at the northwest corner of the building, suggesting that there likely was a service entrance in this area.

Previous subsurface investigations at the Former City Hand Laundry Property have identified concentrations of PCE in soil and groundwater exceeding the MTCA Method A cleanup levels.



The laboratory analytical results of soil samples collected during investigations conducted between 1999 and 2000 detected concentrations of PCE in soil ranging from 0.02 milligrams per kilogram (mg/kg) to 7,200 mg/kg (Farallon 1999, Farallon 2004a). The highest concentrations of PCE in soil were identified near the former sump and drains for the laundry machines and the former location of the dry cleaning machine from 1961 to 1972 (Figure 2). The historical analytical results of soil samples are summarized on Table 1. A detailed summary of the results of previous subsurface investigations was provided in the Work Plan, including the suspected sources and distribution of PCE and other halogenated volatile organic compounds (HVOCs) in soil and groundwater with the former City Hand Laundry Property boundaries (Farallon 2004b).

Feasibility testing conducted by Farallon in 2003 included evaluation of soil vapor extraction (SVE) technology to remediate concentrations of PCE in soil at the Former City Hand Laundry Property exceeding the MTCA Method A cleanup levels. The results of the SVE pilot testing indicate that SVE would be an effective remedial technology (Farallon 2004a).

The above-referenced work was insufficient to assess the lateral and vertical distribution of the releases of PCE and petroleum hydrocarbons in soil or groundwater. This information is required to define the limits of the Site in accordance with the requirements under MTCA and to assess potential technically feasible remedial alternatives for the affected media. The confirmed presence of PCE in groundwater at concentrations exceeding the MTCA Method A groundwater cleanup level and possibility of off-property migration of the PCE-affected groundwater necessitated the need to assess potential technically feasible remedial alternatives for groundwater. A detailed summary of the specific data gaps was provided in the Work Plan (Farallon 2004b).



3.0 FIELD PROGRAM

The scope of work for the additional subsurface investigation program included the following elements:

- Installation of boring B-1 near the former location of the UST used for gasoline and diesel storage;
- Collection of soil samples from borings MW-8 and MW-9, located proximal to a former heating oil UST used to fuel a former boiler;
- Submittal of selected soil samples for laboratory analysis of PCE and associated degradation compounds; TPH as gasoline-range organics (GRO), diesel-range organics (DRO), oil-range organics (ORO), and benzene, toluene, ethylbenzene and xylenes (BTEX); and fraction organic carbon (foc);
- Installation of seven monitoring wells, MW-4 through MW-10 (Figure 3);
- Installation of two wells, AS pilot test well AS-1, and monitoring well MW-1D, for the performance of AS feasibility pilot testing;
- Completion of a laboratory bench-scale test of the soil oxidant demand (SOD) of the saturated soil matrix;
- Groundwater monitoring and sampling at monitoring wells MW-1 through MW-10, MW-1D and AS-1;
- Submittal of groundwater samples for laboratory analysis of HVOCs, GRO, DRO, ORO, and BTEX compounds;
- Performance of AS pilot testing at wells MW-1D and AS-1; and
- Preparation of this report.

The exploration locations referenced above are depicted on Figure 3. The additional subsurface investigation activities are described in detail in the following sections.

3.1 SOIL BORING

A private utility location survey was conducted by Applied Professional Services, Incorporated, of Issaquah, Washington, to locate underground utilities prior to drilling. After all boring locations had been cleared of underground utilities; nine borings were advanced by Cascade Drilling, Inc., of Woodinville, Washington using hollow-stem auger drilling methods. The drilling activities were conducted from May 7 through May 10, 2005. The approximate locations of the borings are shown on Figure 3.

At the request of Ecology (Ecology 2004), a shallow boring B-1 was also advanced to approximately 10 feet below ground surface (bgs) to assess the quality of soil adjacent to the former gasoline/diesel UST. Borings MW-4 and MW-5 were installed in the western parking lot at locations expected to be up-gradient (west) of the former potential source areas (Figure 3).



Borings MW-6 and MW-7 were installed on the east side of Warren Avenue to investigate the lateral extent of PCE in groundwater down-gradient of the Former City Hand Laundry Property (Figure 3).

Farallon collected soil samples from borings AS-1, MW-1D, MW-4, MW-5, MW-8, MW-9 and B-1 to screen for evidence of HVOC and/or petroleum contamination, and to generate a lithologic description of subsurface soil conditions. The boreholes drilled for the installation of monitoring well MW-1D and AS pilot test well AS-1 were not logged from the ground surface to depths of 50 feet and 60 feet bgs, respectively, because of their proximity to monitoring wells MW-1 and MW-3. No soil sampling was conducted at borings MW-6 and MW-7, located in the eastern traffic lane of Warren Avenue, or at boring MW-10, located in the southern traffic lane of 4th Street, because of the presence of overhead power lines that restricted use of the drilling sampling equipment and time limitations for working within the street as established by the Right-of-Way Permit issued by the City of Bremerton. Due to the distance of these borings from the potential sources of PCE, the absence of soil analytical data should not represent a potential future data gap. Groundwater analytical results from these monitoring wells and from those at the Former City Hand Laundry Property will provide sufficient information to estimate the distribution of PCE in soil.

Soil samples were collected at 5-foot intervals from the ground surface to the total depth of the boring except for borings MW-1D and AS-1 where the shallow soil lithology has previously been documented at nearby borings. The soil samples were collected in accordance with the American Society for Testing and Materials and U.S. Environmental Protection Agency (EPA) standard protocols. A Farallon scientist documented the soil lithology in accordance with the Unified Soil Classification System. The soil samples were screened in the field for the presence of volatile organic vapors using a photoionization detector (PID) and were examined for obvious signs of contamination, including visible discoloration, sheens, and odors. The detailed lithologic descriptions and PID readings for each sample interval are presented in the boring logs in Appendix A.

The soil samples collected for potential laboratory analysis were transferred directly from the split-spoon sampling device into laboratory-prepared sample containers following EPA Method 5035 sample collection protocols. All non-dedicated sampling equipment and supplies were decontaminated between uses. The labeled sample containers were immediately sealed with Teflon-lined screw caps and placed on ice in a cooler pending delivery to OnSite Environmental, Inc., of Redmond, Washington, for laboratory analysis. Chain-of-custody procedures were followed during transport of the samples from the Site to the laboratory.

Based on field observations and PID readings, Farallon selected 15 soil samples for laboratory analysis of HVOCs by EPA Method 8260B. Farallon also selected six soil samples from borings B-1, MW-8 and MW-9 for laboratory analysis of GRO, DRO, and BTEX by Northwest Method NWTPH-Gx, NWTPH-Dx and EPA Method 8021B, respectively. Three samples from the upper portion of the water-bearing zone were analyzed for foc by EPA Method 9060 Modified.

Boring B-1 was abandoned by filling the boring with hydrated bentonite pellets and repairing the surface with an asphalt patch. All waste soil generated was placed in appropriately labeled, steel



drums and stored at the Site pending profiling of the waste soil. Additional detail on the waste handling and disposal is presented in Section 4.4.

3.2 MONITORING WELL INSTALLATION

Farallon installed seven groundwater monitoring wells, MW-4 to MW-10, to evaluate groundwater conditions in the upper portion of the water-bearing zone; to assess the distribution of PCE; and to measure groundwater levels and estimate the groundwater gradient and flow direction. Monitoring well MW-1D and AS pilot test well AS-1 were installed to assess the vertical distribution of PCE and facilitate the AS pilot test. The well locations are depicted on Figure 3. Additional details on selection of the well locations are as follows:

- Monitoring wells MW-4 and MW-5 are located on the western portion of the Former City Hand Laundry Property, in an area presumably up-gradient of the suspected source areas based on previous investigation results. The monitoring wells were installed to assess the up-gradient limits of the distribution of PCE in soil and groundwater;
- Monitoring wells MW-6 and MW-7 are located on the east side of Warren Avenue in the presumed down-gradient groundwater flow direction based on the previous investigation results;
- Monitoring well MW-8 is installed to the north of the Former City Hand Laundry Property to assist in the characterization of PCE in groundwater in an assumed cross-gradient location;
- Monitoring well MW-9 is located in the northeast portion of the Former City Hand Laundry Property, down-gradient of the previously confirmed release of PCE identified near monitoring well MW-1, associated with the former sump and drains for the laundry machines. The purpose of monitoring well MW-9 is to further characterize the lateral distribution of PCE in groundwater, serve as a potential SVE well, and as a future point of compliance well;
- Monitoring well MW-10 is installed to the south of the Former City Hand Laundry Property to assist in the characterization of PCE in groundwater in an assumed cross-gradient location; and
- Monitoring well MW-1D and AS pilot test well AS-1 are installed near existing monitoring wells MW-1 and MW-3, respectively.

Monitoring wells MW-4 through MW-10 were installed to total depths of 55 to 60 feet bgs. Wells AS-1 and MW-1D were installed to a depth of approximately 80 feet bgs. The wells were constructed in accordance with Chapter 173-160 of the Washington Administrative Code (WAC 173-160) guidelines. The wells were constructed with 2-inch diameter polyvinyl chloride (PVC) casing with traffic-rated, 8-inch steel flush-mounted monuments. Monitoring wells MW-4 through MW-10 were constructed with 10-foot well screen intervals, with approximately 7 feet of submerged screen based on observed groundwater levels at the time of drilling. Wells AS-1 and MW-10 were constructed with well screen intervals from approximately 78 to 80 feet bgs to



facilitate use as AS pilot test wells. The screened intervals were constructed with 0.020-inch slotted PVC. Detailed logs for the monitoring well construction are included in Appendix A.

The groundwater monitoring wells were developed using a surge block and submersible pump to remove fine materials until groundwater turbidity was minimized. The top of casing elevations for all new and existing groundwater monitoring wells were surveyed with respect to an arbitrary Site datum of 100.00 feet using differential leveling techniques. The surveyed elevations are summarized on Table 2. The well locations were measured relative to existing Site features and other monitoring wells at the Site using taping and measuring techniques.

The decontamination and well development water generated during drilling and well development were placed in appropriately labeled steel drums and stored at the Site pending profiling of the wastewater. Additional detail on the waste handling and disposal is presented in Section 4.4.

3.3 GROUNDWATER MONITORING AND SAMPLING

The groundwater levels in the monitoring wells were measured on June 9, 2005 to assess the approximate direction of groundwater flow and the hydraulic gradient. Prior to measurement, the water level was allowed to equilibrate to atmospheric conditions for a minimum period of 30 minutes after the well was opened. The groundwater level in each monitoring well was measured from the surveyed reference point on the top of the well casing using an electronic water level measurement instrument. The groundwater level measurements are provided on Table 2.

Each monitoring well was purged according to EPA low-flow sampling protocols using dedicated polyethylene tubing and a submersible bladder pump. Water quality parameters were measured with a YSI 650 XL multi-parameter water quality meter equipped with a flow-through cell to assess basic groundwater geochemistry, and to determine when groundwater that was representative of the surrounding formation had entered the monitoring well, as indicated by stabilization of the water quality parameters. The water quality parameters measured included pH, temperature, specific conductance, oxidation-reduction potential (ORP), turbidity, and dissolved oxygen content.

Following purging, the groundwater samples were collected by decanting the groundwater from the dedicated tubing directly into laboratory-prepared containers. The groundwater samples were then transported under chain-of-custody protocols to OnSite Environmental, Inc., for analysis of HVOCs using EPA Method 8260B, GRO by Northwest Method NWTPH-Gx and BTEX by EPA Method 8021B. The groundwater samples collected from monitoring wells MW-1, MW-8, and MW-9 were also analyzed for DRO and ORO by Northwest Method NWTPH-Dx. The groundwater samples collected from monitoring well MW-1D and AS pilot test well AS-1, screened within the deeper portion of the water-bearing zone, were also submitted for laboratory analysis of the major cations calcium, iron, and manganese to evaluate the potential for AS to result in fouling of the well screen.



3.4 AIR SPARGE PILOT TEST METHODS

Farallon conducted two AS pilot tests at the Site to assess the feasibility of applying AS technology to remediate groundwater in the source area. The AS pilot tests were conducted at well AS-1 and monitoring well MW-1D.

Air was injected into the AS pilot test wells using a Gast Model 2067, 1.5-horsepower rotary-vane compressor. A Dwyer rotometer was connected to selected wellheads to monitor the flow rate throughout the AS pilot test. The observation wells were fitted with modified well caps equipped with a monitoring port to allow measurement of air pressure within each well. Air pressure and groundwater level measurements were taken immediately prior to beginning each AS pilot test.

The observation wells were monitored periodically for changes in air pressure using pressure gauges with ranges of 0 to 0.25 inches of water (IOW), 0 to 0.50 IOW, or 0 to 1.0 IOW. Groundwater levels were measured after the air pressure readings in each observation well reached the maximum observed air pressure during each constant flow rate test. The AS pilot testing was conducted for a duration of one to three hours at each flow rate until equilibrium of the pressure responses in the observation wells was achieved.

3.5 CHEMICAL OXIDANT BENCH-SCALE TEST METHOD

Farallon submitted soil samples collected from depths ranging from 60 to 70.5 feet bgs in the saturated zone at boring AS-1 for analysis of the SOD using potassium permanganate as a representative oxidant. The SOD is utilized as a screening tool to assess whether oxidation technologies should be retained for further consideration and whether a field-scale pilot test should be considered. If the saturated soil matrix has a high SOD, oxidant-based technologies will not be cost effective or efficient at removing the contaminants of concern. The oxidants do not preferentially treat the contaminants of concern; therefore, the natural SOD acts as competition, expending the oxidant applied, thus reducing the efficiency of the cleanup action and increasing the costs.

The soil samples submitted were submitted to OnSite Environmental, Inc. of Redmond, Washington for analysis of the SOD. The laboratory composited the soil samples and conducted the assessment of the SOD using potassium permanganate. The first phase of the test involved a preliminary screening of the SOD to estimate the dose of permanganate required for assessment of the SOD. The preliminary testing included combining 20 grams of the composite soil sample with a 1-gram per kilogram (g/kg) and a 5-gram per kilogram dose of potassium permanganate for a period of 24 hours to assess whether the oxidant was consumed. The results were then used to develop a range of dosages of permanganate to refine the assessment of the SOD.

The potassium permanganate dosage was varied from 0.05 to 1.0 g/kg based on the results of the preliminary SOD test. The permanganate was placed in solution and introduced into vials containing 20 grams of the composite soil sample. The vials were mixed by hand and then tested for potassium permanganate following 4 hours, 1 day, 4 days, and 7 days to assess the



consumption rate of the oxidant. The bench-scale test procedures and test results are included in Appendix E.



4.0 RESULTS

The results of the subsurface investigation are presented in the sections that follow. The MTCA Method A soil and groundwater cleanup levels, or where no MTCA Method A cleanup level exists, the MTCA Method B cleanup level, was used as the preliminary screening levels for all soil and groundwater analytical data. The final cleanup levels that are appropriate to the Site will be evaluated and selected prior to implementing a cleanup action.

4.1 GEOLOGY AND HYDROGEOLOGY

The boreholes drilled during the additional subsurface investigation encountered medium dense to dense sand and silty sand, with lenses of silt from beneath the asphalt and subgrade materials to an approximate depth of 30 feet bgs. Beneath the sand and silty sand was a gravelly sand to sandy gravel unit in which groundwater was encountered. A discontinuous layer of sand and gravel with silt was encountered at approximately 45 to 55 feet bgs. Cross-sections A-A' and C-C' (Figure 4) illustrate the soil lithology underlying the Site from west to east and Cross-section B-B' (Figure 4) from north to south. Soil observed during drilling of the borings indicated that there are minor lithologic changes within the soil matrix explored. However, there were no contiguous layers of soil that may represent potential confining layers that would inhibit the downward movement of contaminants to the maximum depth of exploration of 80 feet bgs. Boring logs for the borings completed during this investigation are presented in Appendix A.

The groundwater level measurements and calculated groundwater elevations are summarized in Table 2. On June 9, 2005, the groundwater elevations in the upper portion of the water-bearing zone ranged from 41.91 feet at monitoring well MW-10 to 47.33 feet at monitoring well MW-1 (Table 2). The groundwater elevations were calculated with respect to the arbitrary datum of 100 feet based on a surveyed point on the northern portion of each monitoring well casing. Based on the groundwater elevation measurements, the approximate direction of shallow groundwater flow beneath the Site was to the southeast (Figure 5). The average hydraulic gradient across the Site was 0.04 foot/foot.

Groundwater elevations in the deeper wells were 45.58 feet at monitoring well MW-1D, and 43.53 feet at air sparge pilot test well AS-1. Groundwater elevations in adjacent shallow wells were 47.33 feet at monitoring well MW-1, and 47.29 feet at monitoring well MW-3 (Figure 3). The relative differences in groundwater elevation between the well pairs were -1.75 feet for MW-1D/MW-1, and -3.76 feet for AS-1/MW-3. The negative difference in groundwater elevations, or "head" difference between the wells screened in the deeper portion of the water-bearing zone versus the shallow portion indicates that the vertical gradient is downward.

4.2 SOIL RESULTS

A summary of the analytical results for soil samples collected during the previous investigations is provided in Table 1. The analytical results for the soil samples collected during the additional subsurface investigation are summarized on Table 3 and presented on Figure 6. The laboratory



analytical results for the TPH and foc analyses are summarized in Tables 4 and 5, respectively. The laboratory analytical reports for this subsurface investigation are presented in Appendix B. The laboratory analytical results are discussed in detail in the following sections.

4.2.1 Halogenated Volatile Organic Compounds

The laboratory analytical results of soil samples collected during the additional subsurface investigation detected concentrations of PCE in all of the soil samples selected for laboratory analysis at concentrations ranging from 0.0031 mg/kg to 4 mg/kg (Table 3). Eleven of the fifteen soil samples submitted for laboratory analysis contained concentrations of PCE exceeding the MTCA Method A cleanup level of 0.05 mg/kg. The soil samples with concentrations of PCE exceeding the MTCA Method A cleanup level were collected at depths ranging from 5 to 45.5 feet bgs in borings B-1, MW-4, MW-5, MW-8 and MW-9.

The PCE degradation compounds, trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE) were detected in soil samples collected at borings B-1, MW-4, MW-8 and MW-9 at depths ranging from 7.5 to 45.5 feet bgs. Concentrations of TCE and cis-1,2-DCE were below their respective MTCA cleanup levels for soil. Concentrations of the PCE degradation compounds trans-1,2-DCE, 1,1-DCE, and vinyl chloride were not detected above the laboratory practical quantitation limits (PQLs).

4.2.2 Total Petroleum Hydrocarbons

Concentrations of GRO, DRO, ORO or BTEX were not detected above the laboratory PQLs in the soil samples submitted from borings MW-8 and MW-9 (Table 4). A low concentration of GRO, at 8.9 mg/kg was detected in soil sample B1-5-6.5. However, the laboratory analytical report noted that the reported concentration of GRO was attributed to a single peak, which is likely PCE, and not the presence of GRO in the sample (Appendix B).

4.2.3 Fraction Organic Carbon

The soil samples collected from soil borings MW-4, MW-5 and MW-8 at depths of 50 to 55 feet bgs were submitted for laboratory analysis of foc. The laboratory analytical results did not detect foc above the laboratory PQL of 0.00110 gram per gram (Appendix B).

4.3 GROUNDWATER RESULTS

The field measurement and laboratory analytical results for the groundwater samples collected during the additional subsurface investigation are summarized on Tables 5 through 7 and presented on Figure 7. Summaries of historical groundwater analytical results for HVOCs and TPH are provided on Tables 6 and 7, respectively. The laboratory analytical reports for the subsurface investigation are presented in Appendix B. The field measurement and laboratory analytical results are discussed in the following sections.



4.3.1 Water Quality Parameters

The general groundwater quality parameters measured during the June 2005 groundwater monitoring and sampling event are summarized on Table 5 and follow:

- The groundwater temperature ranged from 13.7 degrees Celsius to 15.2 degrees Celsius;
- The measured concentrations of dissolved oxygen ranged from 6.7 to 9.3 milligrams per liter in the monitoring wells screened within the upper portion of the water-bearing zone;
- Dissolved oxygen concentrations in groundwater at wells screened within the deeper portion of the water-bearing zone, monitoring well MW-1D and well AS-1, were measured at 0.9 and 2.6 milligrams per liter, respectively;
- The measured ORP values ranged from 78.3 to 133.3 millivolts in groundwater at wells screened within the upper portion of the water-bearing zone;
- ORP values were 90.8 and 95.2 millivolts in groundwater at monitoring well MW-1D and well AS-1, which are screened within the deeper portion of the water-bearing zone; and
- Measured pH values ranged from 5.5 to 7.3 with no consistent differences between groundwater sampled from the upper or lower portions of the water-bearing zone.

The groundwater samples collected from the wells screened within the deeper portion of the water-bearing zone, monitoring well MW-1D and well AS-1, were submitted for laboratory analysis of total calcium, iron, and manganese in addition to the HVOC analysis. The laboratory analytical results for calcium were 18,000 and 20,000 micrograms per liter ($\mu\text{g/l}$) in wells MW-1D and AS-1, respectively. Iron was detected at concentrations of 11,000 $\mu\text{g/l}$ and 9,200 $\mu\text{g/l}$ and manganese was detected at concentrations of 590 $\mu\text{g/l}$ and 940 $\mu\text{g/l}$ in wells MW-1D and AS-1, respectively (Table 5).

4.3.2 Halogenated Volatile Organic Compounds

Concentrations of PCE in groundwater samples collected from all monitoring wells exceeded the MTCA Method A cleanup level of 5.0 $\mu\text{g/l}$. The detected concentrations of PCE ranged from 26 $\mu\text{g/l}$ in the groundwater sample collected monitoring well MW-1D from within the deeper portion of the water-bearing zone, to 2,100 $\mu\text{g/l}$ in the groundwater samples collected from monitoring wells MW-2 and MW-3 (Table 6, Figure 7).

A concentration of TCE of 5.9 $\mu\text{g/l}$ was detected in the groundwater sample collected from monitoring well MW-8, which is slightly above the MTCA Method A cleanup level of 5 $\mu\text{g/l}$. Concentrations of TCE and cis-1,2-DCE were detected above the laboratory PQL but below their respective MTCA groundwater cleanup levels in the groundwater sample collected from monitoring well MW-1D. Concentrations of cis-1,2-DCE above the laboratory PQL but below the MTCA Method B cleanup level of 80 $\mu\text{g/l}$ (Table 6) were also detected in the groundwater samples collected from monitoring wells MW-8 and MW-9.



Chloroform was detected in groundwater samples collected from the deeper portion of the water-bearing zone at monitoring well MW-1D and well AS-1 at concentrations above the laboratory PQL but below the MTCA Method B cleanup level of 7.17 $\mu\text{g/l}$. Chloroform is a common laboratory solvent and is also frequently identified in treated municipal water supplies; it is not likely related to releases at the Site. The laboratory analytical results did not detect concentrations of any other HVOCs exceeding the laboratory PQLs.

4.3.3 Petroleum Hydrocarbons

Concentrations of GRO, DRO, ORO, and/or BTEX above the laboratory PQLs were not detected in the groundwater samples collected from monitoring wells MW-1 through MW-10. The laboratory analytical results are summarized on Table 7. The laboratory analytical reports are attached in Appendix B.

4.4 WASTE DISPOSAL

A total of fifty-one 55-gallon drums of soil cuttings, purge water and decontamination water were generated during the additional subsurface investigation activities. Farallon prepared a letter requesting that a Contained-In Determination be granted for soils generated by the boring activities during the additional subsurface investigation. The letter requested that the soils containing the F-listed waste, PCE, be designated as non-hazardous waste under the principles of the Resource Conservation and Recover Act "Contained-In" Policy based on the laboratory analytical results of soil samples collected during the additional subsurface investigation, which detected concentrations of PCE up to 4 mg/kg. Ecology determined that the soil generated from soil borings AS-1, MW-1D, MW-7, MW-8 and MW-9 must be handled as dangerous (hazardous) waste. However, Ecology concurred that soil generated from soil borings B-1, MW-4, MW-5, MW-6, and MW-10 did not contain concentrations of PCE that warranted management of the soil as dangerous waste and granted permission to dispose of the soil as non-hazardous (solid) waste. Based on the requirements of the Contained-In Determination, the soil was transported to Columbia Ridge Landfill's Chemical Waste Management in Arlington, Oregon for direct landfilling and treatment.

A total of 6.8 tons of soil was transported from the Site and disposed of as non-hazardous waste at the Columbia Ridge Landfill in Arlington, Oregon in accordance with the conditions of the Contained-In Determination. A total of 10 tons of soil and 495 gallons of wastewater were transported from the Site and disposed of as hazardous waste at the Columbia Ridge Landfill's Chemical Waste Management in Arlington, Oregon for direct treatment/stabilization, and then landfilling in accordance with Ecology Dangerous Waste Regulations, WAC 173-303.

4.5 AIR SPARGE PILOT TEST RESULTS

Air sparging is a technology used in combination with SVE where groundwater has been affected by volatile organic compounds such as those identified at the Site. SVE and AS are proven technologies that are frequently selected as remedial alternatives and approved by Ecology at sites where conditions are conducive to their application. The feasibility of SVE was assessed during a previous investigation at the Site, with positive results. The results of the AS



pilot testing and conducted as wells AS-1 and MW-1D are described below. Summary tables showing the raw data collected during the AS pilot test and figures depicting the results of the AS pilot test are included in Appendix C.

4.5.1 Pilot Testing at Well AS-1

The pilot test at well AS-1 was conducted on July 13, 2005. The observation wells selected for the pilot test included monitoring wells MW-2, MW-3, MW-4, MW-5, MW-9 and MW-10 (Figure 3). The observation wells were selected based on their relative distances from well AS-1. The data collected during the pilot test at well AS-1 is summarized on Table C-1 of Appendix C. Figure C-1 depicts the observed pressure changes in the observation wells during the pilot test.

The AS pilot test consisted of injecting air at constant flow rates of 2.5 standard cubic feet per minute (scfm), 5 scfm, and 6.2 scfm for 1 to 2 hours at each flow rate to observe pressure changes in the observation wells (Table C-1). A positive response is indicated by a rise in pressure in the observation wells that is equal to or greater than a 0.1-IOW change from the initial baseline wellhead pressure reading. A rise in groundwater elevation was also used as a means of assessing whether there was a positive response.

The pressure measurements taken during the AS pilot test indicate a positive response in all of the observation wells (Figure C-1) at flow rates of 5 and 6.2 scfm. A positive response was observed at all flow rates in monitoring well MW-3, located 14 feet from well AS-1. Positive responses were also observed in monitoring wells MW-2, MW-5, MW-9, MW-4, and MW-10 at flow rates of 5 scfm and 6.2 scfm. The largest change in pressure in the monitoring wells used for observation occurred when the flow rate was changed from 2.5 scfm to 5 scfm. There was little to no difference in the observed response between flow rates of 5 and 6.2 scfm in most of the observation wells. Additionally, there was little to no difference in observed responses in monitoring wells located between 35 and 78 feet from well AS-1. The greatest response was observed in monitoring wells MW-5 and MW-10, located at distances of 58 and 78 feet, respectively, from well AS-1. The greater response in monitoring wells MW-5 and MW-10 likely is attributable to their construction, which consists of well screens extending 5 feet deeper than the other monitoring wells used for observation.

The changes in groundwater levels are depicted on Figure C-2. The greatest change in groundwater level during the pilot test at well AS-1 was at observation wells MW-5 and MW-10 with a rise of 0.07 feet and 0.09 feet, respectively. Groundwater level changes were also observed in observation wells MW-2, MW-3 and MW-4. The greatest changes in groundwater level were observed at a flow rate of 6.2 scfm, however, the groundwater level changes observed in monitoring wells MW-2, MW-3 and MW-4 were the same at all three pilot test flow rates.

4.5.2 Pilot Testing at MW-1D

The pilot test at monitoring well MW-1D was conducted on July 14, 2005. The observation wells selected for the pilot test included monitoring wells MW-1, MW-3, MW-4, MW-5, MW-8, MW-9 and MW-10 (Figure 3). The observation wells were selected based on their relative distances from well MW-1D. The data collected during the pilot test is summarized on Table C-



2 of Appendix C. Figure C-3 depicts the observed pressure changes in the observation wells during the pilot test.

The AS pilot test at monitoring well MW-1D consisted of injecting air at constant flow rates of 2.5 scfm, 5 scfm, and 6 scfm. Air pressure readings indicated a positive response in all observation wells at flow rates of 2.5, 5, and 6 scfm (Table C-2). The largest change in pressure in the observation wells occurred when the flow rate was changed from 2.5 to 5 scfm. There was little to no response difference with the flow increase from 5 to 6 scfm or with distance of the observation well from the AS pilot test well.

The changes in groundwater levels with respect to the groundwater levels measured before starting the pilot test at monitoring well MW-1D are depicted on Figure C-4 and in Table C-2. The greatest changes in groundwater levels during the pilot test were at observation wells MW-5 and MW-10 at a flow rate of 6 scfm. Observation wells MW-5 and MW-10 are located at distances of approximately 86 and 128 feet from AS pilot test well MW-1D, respectively. Smaller changes in groundwater levels were documented in observation wells located closer to the AS pilot test well.

4.5.3 Air Sparge Test Results Summary

The results of the AS pilot testing confirmed that AS is a technically feasible remedial alternative for cleanup of groundwater at the Former City Hand Laundry Property and the Site. Positive responses were observed in observation wells located up to 78 and 128 feet from the AS pilot test wells AS-1 and MW-ID, respectively. A conservative radius of influence of 45 feet from each AS well, which is based on a 60 percent reduction in the radius of influence observed during the AS pilot test at well AS-1, is appropriate for design of an AS system. This design radius is anticipated to be adequate to account for the variability in the subsurface lithology and response to the air injection. Based on the results of the AS pilot tests, a flow rate of 5 to 6 scfm to each well will be necessary to overcome the resistance of the soil formation in the saturated zone to air flow.

4.6 CHEMICAL OXIDATION BENCH-SCALE TEST

The presence of PCE in groundwater beyond the boundaries of the Former City Hand Laundry Property and the absence of detectable foc indicated that oxidant-based technologies could potentially be applicable for cleanup of HVOCs in the water-bearing zone. Oxidation technologies include both chemical oxidants such as permanganate (potassium or sodium), persulfate, and hydrogen peroxide (Fenton's Reagent), and ozone. Chemical oxidants may be injected into the water-bearing zone via monitoring wells or borings in areas where in situ remedial alternatives at the Former City Hand Laundry Property cannot effectively treat. This may include areas beneath the city streets and possibly adjacent properties where concentrations of HVOCs exceed the cleanup levels. Ozone may be introduced into an AS system to increase the rate of cleanup if the AS alone is not sufficiently rapid. The bench-scale test results are included in Appendix E and follow.



4.6.1 Bench-Scale Test Results

The results of the bench-scale testing conducted for a timeframe of 7 days indicated that the 7-day SOD value was 0.1-gram potassium permanganate per kilogram soil. The test results indicated that after 7 days, 100 percent of the potassium permanganate in the 0.5-g/kg dosage sample was consumed. Similarly, 97 percent of the potassium permanganate in the 0.1 g/kg dosage sample was consumed and 34 percent of the 1.0-g/kg dosage sample was consumed.

The bench-scale test was discontinued after 7 days because sufficient data were available to assess the SOD and confirm that the SOD is low. The results of the testing indicate that oxidant-based technologies should be retained for further evaluation as possible components of the cleanup action.



5.0 CONCLUSIONS

Conclusions of the additional subsurface investigation and feasibility testing are presented in the sections that follow. The conclusions include identification of the constituents of concern that will be retained throughout the cleanup action, the current understanding of soil and groundwater conditions, soil and groundwater quality, fate and transport characteristics, definition of the Site, and the potential application of AS and oxidant-based technologies for cleanup at the Site.

5.1 CONSTITUENTS OF CONCERN

Based on the results of the additional subsurface investigation and previous investigations, the only constituent of potential concern that was detected in soil exceeding the preliminary screening level is PCE. PCE will be retained as a constituent of concern for soil during the remedial action at the Site. PCE and TCE were detected in groundwater exceeding the preliminary screening levels and will be retained as constituents of concern for groundwater during the remedial action at the Site. Petroleum compounds are not present in soil or groundwater at concentrations that warrant further investigation or retention as constituents of concern.

5.2 HYDROGEOLOGY

The soil conditions encountered during the additional subsurface investigation are similar to those described during previous subsurface investigations and indicate that the subsurface lithology is composed of two general units. A heterogeneous mixture of sand and silty sand with traces of gravel extends from the ground surface to a total depth of approximately 25 to 30 feet bgs (Figure 4). The soil below 25 to 30 feet bgs consists of gravelly sand and sandy gravel with trace to minor amounts of silt to the total depth explored of 80 feet.

The laboratory analytical results of soil samples collected from depths of 50 to 55.5 feet bgs during the additional subsurface investigation indicate that the foc in the saturated soil were below 0.0011 grams per gram. The foc is negligible, indicating that the sorptive capacity of the soil in the upper portion of the water-bearing zone is low. A low sorptive capacity means that retardation of certain contaminants such as PCE and TCE in the saturated zone will be minimal and contaminants will move only slightly slower than the groundwater velocity. The sorptive capability of the unsaturated soil matrix has not been assessed; however, the decreasing concentrations of PCE from the ground surface to the water-bearing zone, and concentrations of PCE in groundwater immediately beneath the Former City Hand Laundry Property indicate that the overlying soil may have a greater sorptive capacity than the saturated zone.

Groundwater was measured at depths ranging from 45 feet to 54 feet below the top of the monitoring well casings during the June 2005 groundwater monitoring and sampling event. The calculated groundwater flow direction for the June 2005 monitoring and sampling event indicates that the groundwater flows is generally towards the southeast. The groundwater flow direction is different than what was expected based on previous investigation data, which had consistently



indicated an easterly flow direction. The addition of the new monitoring wells has refined the understanding of groundwater flow and potential distribution of PCE in groundwater.

The water-bearing zone is continuous from the first encountered groundwater to the total depth of 80 feet bgs explored at the Site. There are no indications in the observed subsurface lithology of any continuous layers of lower-permeability soil that could act as an aquiclude or aquitard to the transport of groundwater. The thickness of the water-bearing zone is currently not known.

The groundwater elevation measurements for monitoring well pairs screened in the upper and lower portions of the water-bearing zone indicate that there is a downward vertical groundwater gradient from the upper portion of the water-bearing zone to the lower portion of the water-bearing zone. This means that PCE in the upper portion of the water-bearing zone could be transported downward via the vertical gradient but should be diluted. The lower concentrations of PCE in the deeper portion of the water-bearing zone are consistent with a downward vertical gradient.

5.3 SOIL

The laboratory analytical results of soil samples collected during the additional subsurface investigation detected concentrations of PCE exceeding the MTCA Method A cleanup level of 0.05 mg/kg from depths of 5 to 45.5 feet bgs. The concentrations generally decreased approaching the saturated zone, which is consistent with the results of previous investigations.

The highest concentrations of PCE detected in soil during the additional subsurface investigation were identified in borings MW-8 (4 mg/kg) and MW-9 (3.8 mg/kg) at depths of 25 feet and 10 feet bgs, respectively. The soil analytical results from this and the previous Site investigations indicate that the PCE is widely distributed in the upper 20 feet of the shallow soil matrix underlying the Former City Hand Laundry Property and has reached groundwater.

The laboratory analytical results of soil samples collected from boring MW-8 detected concentrations of PCE exceeding the MTCA Method A cleanup level in samples collected at 10, 25, and 45 feet bgs. The highest concentration of PCE was detected in the soil sample collected from 25 feet bgs, indicating lateral transport of PCE in the vadose zone 35 to 50 feet from any known potential sources of PCE on the Former City Hand Laundry Property (Figure 3).

Farallon considered several potential scenarios to account for a release of PCE to the subsurface close to boring MW-8, including disposal to the ground surface, or releases from the sanitary sewer or storm drain system. Aerial photographs of the property reviewed by Farallon did not show any doors on the north side of the former building from which contaminant-laden wastewater or contaminants themselves could have been dumped into the alley and flowed into the ground (Appendix D). The suspected location of the former side sewer connection for the building is on the southern portion of the property. Further the stormwater system that crosses to the north into the alley was not present prior to conversion of the property to a parking lot. The absence of any known underground piping that extends to the north limits the possibility of preferential transport of PCE via a utility corridor. The lateral distribution of contaminated soil



to the north was not defined by this investigation nor has the origin of the contamination in this area been identified.

The detected concentrations of PCE at borings MW-4 and MW-5, located on the western portion of the parking lot exceeded the MTCA Method A cleanup levels. The depth of contamination detected at boring MW-4 extended to the saturated zone with concentrations ranging from 0.16 mg/kg at 10 to 11.5 feet bgs to 0.11 mg/kg at 45 to 45.5 feet bgs. The extent of PCE-contaminated soil to the west was not defined by data from borings MW-4 and MW-5. The source of the relatively low concentrations of PCE is interpreted to be vapor phase transport of PCE within the vadose zone from sources on the eastern portion of the property. Farallon expects that similar low-level concentrations of PCE may be present in the vadose zone throughout the area encompassed by the PCE-affected groundwater, including borings MW-6, MW-7, and MW-10. The concentrations of PCE in the upper portion of the vadose zone should diminish significantly with distance from the property; however, low-level concentrations of PCE may be present in vadose zone soil immediately above the capillary fringe zone.

The laboratory analytical results of soil samples collected during the additional subsurface investigation in the vicinity of the former petroleum source areas did not detect concentrations of petroleum compounds above the laboratory PQLs. Based on these results, petroleum hydrocarbons will not be considered constituents of concern for soil at the Site.

5.4 GROUNDWATER

The results of groundwater monitoring and sampling in June 2005 indicate that the concentrations of PCE exceeding the MTCA Method A cleanup level were present at all of the monitoring well locations. Therefore, neither the lateral nor vertical distribution of PCE has been defined in groundwater.

The laboratory analytical results detected PCE in monitoring well MW-1D and AS pilot test well AS-1, which are screened within the deeper portion of the water bearing zone at 80 feet bgs, at concentrations of 50 µg/l and 26 µg/l, respectively, which are above the MTCA Method A cleanup level of 5 µg/l. The one to two order of magnitude lower concentrations of PCE in groundwater at deep wells MW-1D and AS-1 than detected in adjacent monitoring wells screened within the upper portion of the water-bearing zone indicate that PCE as dense nonaqueous-phase liquid likely is not present in the water-bearing zone. The concentrations of PCE detected in monitoring wells screened in the lower portion of the water-bearing zone are likely attributable to contaminated groundwater transported from the upper portion of the water-bearing zone due to the downward vertical gradient at the Site.

The presence of PCE-contaminated groundwater at monitoring wells MW-4 and MW-5 on the western portion of the Former City Hand Laundry Property, up-gradient of the known source areas and at monitoring wells MW-8 and MW-10, cross-gradient of the known source area, indicates that the lateral dispersion of PCE from the source areas was more widespread than anticipated. The distribution of contamination may be further refined in the future but is not required to proceed with assessment of potential technically feasible remedial alternatives.



The lateral distribution to the north has not been confirmed by this investigation. Further investigation may be limited due to access associated with the north adjacent property use as a church and utilities present, especially overhead power present along the west side of Warren Avenue and in the alley. Groundwater modeling may be necessary to further assess the distribution of PCE in groundwater to the north if empirical data cannot be collected via installation of additional monitoring well(s).

The laboratory analytical results for the June 2005 groundwater monitoring and sampling event did not detect concentrations of PCE degradation compounds that would typically indicate chemical or biological degradation are significant processes. However, the low concentrations of TCE and/or cis-1,2-DCE detected in the groundwater samples collected from monitoring wells MW-1D, MW-8 and MW-9 indicate evidence of some level of chemical or biological degradation. The preliminary assessment of the groundwater conditions suggests that the environment may not be sufficiently reducing to be amenable for bacteria capable of degrading HVOCs. Natural attenuation does not appear to be a potential feasible remedial alternative for the Site without altering the subsurface environment, and possibly injecting HVOC-degrading bacteria.

The laboratory analytical results of groundwater samples collected during the June 2005 groundwater monitoring and sampling event did not detect concentrations of petroleum hydrocarbons above the laboratory PQLs. Based on these results, petroleum hydrocarbons will not be considered a constituent of concern for groundwater at the Site.

5.5 DEFINITION OF THE SITE

The results of this and the previous investigations have confirmed that concentrations of PCE exceeding the MTCA Method A cleanup levels for soil and groundwater extend beyond the property boundary of the Former City Hand Laundry Property. Under MTCA, a Site is defined as any area that a hazardous substance has come to be located; therefore the boundaries of the Site have been confirmed to extend beyond the Former City Hand Laundry Property. The results of the investigation indicate that the Site boundaries have not been defined by the existing monitoring well network and extend beyond the limits of MW-4, MW-5, MW-6, MW-7, MW-8, and MW-10 (Figure 7).

Ecology will require that the Site boundaries be defined which will require a combination of additional subsurface investigation and modeling to refine the understanding of the lateral and vertical distribution of the PCE in soil and/or groundwater. The presence of private property, utilities, and structures in the area surrounding the Former City Hand Laundry Property will likely restrict the capability to perform subsurface investigation in all areas required to define the Site with empirical soil and/or groundwater data. Therefore, additional data concerning the geologic and hydrogeologic properties of the Site will be required to utilize modeling techniques along with empirical data to estimate the Site boundaries and define an appropriate cleanup action.



5.6 AIR SPARGE AND OXIDANT FEASIBILITY TESTING

The investigation data has confirmed that concentrations of PCE in groundwater that exceed the MTCA Method A cleanup level extend off the Former City Hand Laundry Property to the north, south, and east and to depths greater than 80 feet bgs. The results of the AS feasibility testing indicate that AS is a feasible remedial alternative for the remediation of PCE in groundwater at the Site within the vicinity of the Former City Hand Laundry Property boundaries and a limited distance around the property; however, AS wells and trenching cannot be extended beyond the property boundaries due to the presence of numerous utility corridors with main water, sewer, natural gas, and communication lines. The locations of these utilities are prohibitive to performing the trenching and pipe installation necessary to extend the AS system beyond the limits of the Former City Hand Laundry Property according to discussions with the City of Bremerton Engineering Department. However, an AS system may be designed to reach the maximum off-property extent without risking the integrity of underground utility lines, possibly utilizing AS wells drilled at an angle extending from the Former City Hand Laundry property to areas beneath the city streets.

Changes in air pressure and groundwater level in the observation wells during the AS pilot test indicate that there was a positive response at distances up to 128 feet from the AS pilot test wells. The observed responses were greater in monitoring wells with screened intervals extending deeper and closer to the AS pilot test wells; however, responses were observed across the entire screened interval of the water column. The lack of a consistent relationship in the pressure changes or groundwater levels with respect to the distance from the AS pilot test wells suggests that there are likely variable physical characteristics of the soil that are resulting in the preferential transport of sparge air. Because variations in the soil lithology could influence the flow of air through the subsurface, a conservative radius of 45 feet would be proposed for design purposes if this technology were used for groundwater remediation at the Site.

Well fouling can occur in AS wells through the disposition of naturally-occurring inorganic solutes such as calcium, iron and manganese or by growth of indigenous micro-organisms because of changes in the thermodynamic properties of the water-bearing zone, such as temperature and pressure, or because of changes in the chemical properties of groundwater, such as through the addition of oxygen (Driscoll, 1986). Inorganic fouling can result in precipitates composed of iron oxides or magnesium oxides that can cause well failure. Microbial bacterial deposits commonly found causing well failure in remediation systems include iron-related bacteria and sulfate reducing species.

The laboratory analytical results for groundwater collected from wells AS-1 and MW-ID detected iron content of 9.2 to 11 mg/l and calcium content of 18 to 20 mg/l (Table 5). Based on these results and the documented characteristics of the groundwater in wells AS-1 and MW-ID (i.e., temperature, dissolved oxygen, pH, ORP), well fouling may be a concern and would need to be addressed during the design/operation of an AS system.

The results of the preliminary screening of oxidant-based technologies indicate that the natural SOD of the saturated zone is low, which supports further assessment of the potential of oxidant-based technologies. Chemical oxidants have the potential to be utilized to treat PCE in the



saturated zone that extends beyond the effective treatment radius of SVE and AS technologies. The effective radius of injection, the potential rate of transport of the chemical oxidant in the groundwater media, and the residence time within the water-bearing zone requires further evaluation prior to utilizing this technology as a component of a cleanup action. A limited field-scale pilot test would need to be performed to assess the aforementioned parameters.



6.0 DATA GAPS AND FUTURE WORK

The remaining data gaps include the definition of the lateral and vertical distribution of the PCE, primarily in the groundwater media. Concentrations of PCE in soil to the south, east, and west of the Former City Hand Laundry Property are likely low and associated with vapor phase transport from PCE in the vadose zone and the underlying groundwater plume. The potential for an unidentified source of PCE in soil to the north of the Former City Hand Laundry Property exists but further investigation is restricted by the presence of the church and both underground and overhead utilities. SVE technology likely will address soil contamination at and surrounding the Former City Hand Laundry Property, thereby eliminating the need for further investigation of the exact limits of soil contamination at, and off of the Former City Hand Laundry Property.

A combination of empirical data and modeling will be utilized to refine the estimates of the distribution of PCE in groundwater. This will require additional monitoring wells combined with aquifer testing to assess the hydrogeologic characteristics of the water-bearing zone, including the hydraulic gradient, seepage velocity, effective porosity, and range of potential retardation factors. Farallon proposes to conduct another phase of investigation to refine the understanding of the distribution of PCE and acquire the necessary hydrogeologic data to perform groundwater modeling and assess the potential distribution of PCE in areas where empirical data cannot be collected. Following this phase of investigation, sufficient information on the potential distribution of PCE should be available to meet the requirements under MTCA.

Seasonal groundwater effects also require further investigation. Groundwater sampling at all the existing monitoring wells has been performed only in the summer of 2005. Quarterly groundwater sampling for a minimum of one year will be required to refine the understanding of the potential seasonal effects of groundwater fluctuations on the hydraulic gradient and groundwater flow direction, as well as any correlation with the concentrations of PCE observed in groundwater. Quarterly groundwater sampling will be initiated in early 2006.

Sufficient information is available to design an SVE and AS system for use at the Former City Hand Laundry Property to commence remediation of soil and groundwater. This would effectively reduce the PCE mass migrating off the Former City Hand Laundry Property and will result in attenuation of the plume down gradient. An SVE/AS system can be utilized as an interim remedial action and incorporated into the final cleanup action.

The existing data indicate that biodegradation likely is not a significant process in the upper or lower portions of the water-bearing zone but is occurring based on the very low levels of the PCE degradation products TCE and cis-1,2-DCE. Because biodegradation is minimal, natural attenuation would not result in a timely cleanup. This remedial alternative does not appear to be feasible as a component of the cleanup action for PCE in groundwater.

The preliminary screening of oxidant-based technologies indicate that further field-scale pilot testing is required to support potential design and implementation of this technology. The focus of a field-scale pilot test would be on the application of a chemical oxidant rather than ozone. Ozone requires a delivery system to constantly introduce ozone into the water-bearing zone due



to its extremely short residence time. Ozone may be retained for future consideration as an enhancement to the AS technology if the rate of cleanup using AS alone will not result in timely cleanup that meets the needs of all involved parties.



7.0 REFERENCES

- Driscoll, Fletcher, D. 1986. "Well and Pump Maintenance and Rehabilitation." *Groundwater and Wells*. Second Edition. U.S. Filter/Johnson Screens, St. Paul, Minnesota. pp. 633-655.
- Farallon Consulting, L.L.C. 1999. Phase II Subsurface Investigation, Land Title Building Parking Lot. December 6.
- _____. 2004a. Subsurface Investigation and Soil Vapor Extraction Feasibility Pilot Test. January 27.
- _____. 2004b. Work Plan, Additional Subsurface Investigation and Air Sparging Pilot Testing. April 16.
- _____. 2004c. Letter Regarding Response to Request for Review and Opinion Letter. To the Washington State Department of Ecology. March 14
- SECOR International Incorporated. 1998. *Land Title Building Site Investigation Report*. June 12.
- Washington State Department of Ecology (Ecology). 2001a. *Model Toxics Control Act Cleanup Regulation*. Chapters 173-340 of the Washington Administrative Code. February 12.
- _____. 2001b. *Cleanup Levels and Risk Calculations under the Model Toxics Control Act Cleanup Regulation, Version 3.1*. November.
- _____. 2004. Letter Regarding Response to Request for Review and Opinion Letter, Former City Hand Laundry. To Farallon Consulting, L.L.C. September 20.
- _____. 2005. E-mail Message Regarding City Hand Laundry. From Nnamdi Madakor, VCP Policy and Technical Manager, Ecology Southwest Regional Office. March 29.



8.0 LIMITATIONS

The conclusions and recommendations contained in this report/assessment are based on professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location, and are subject to the following inherent limitations:

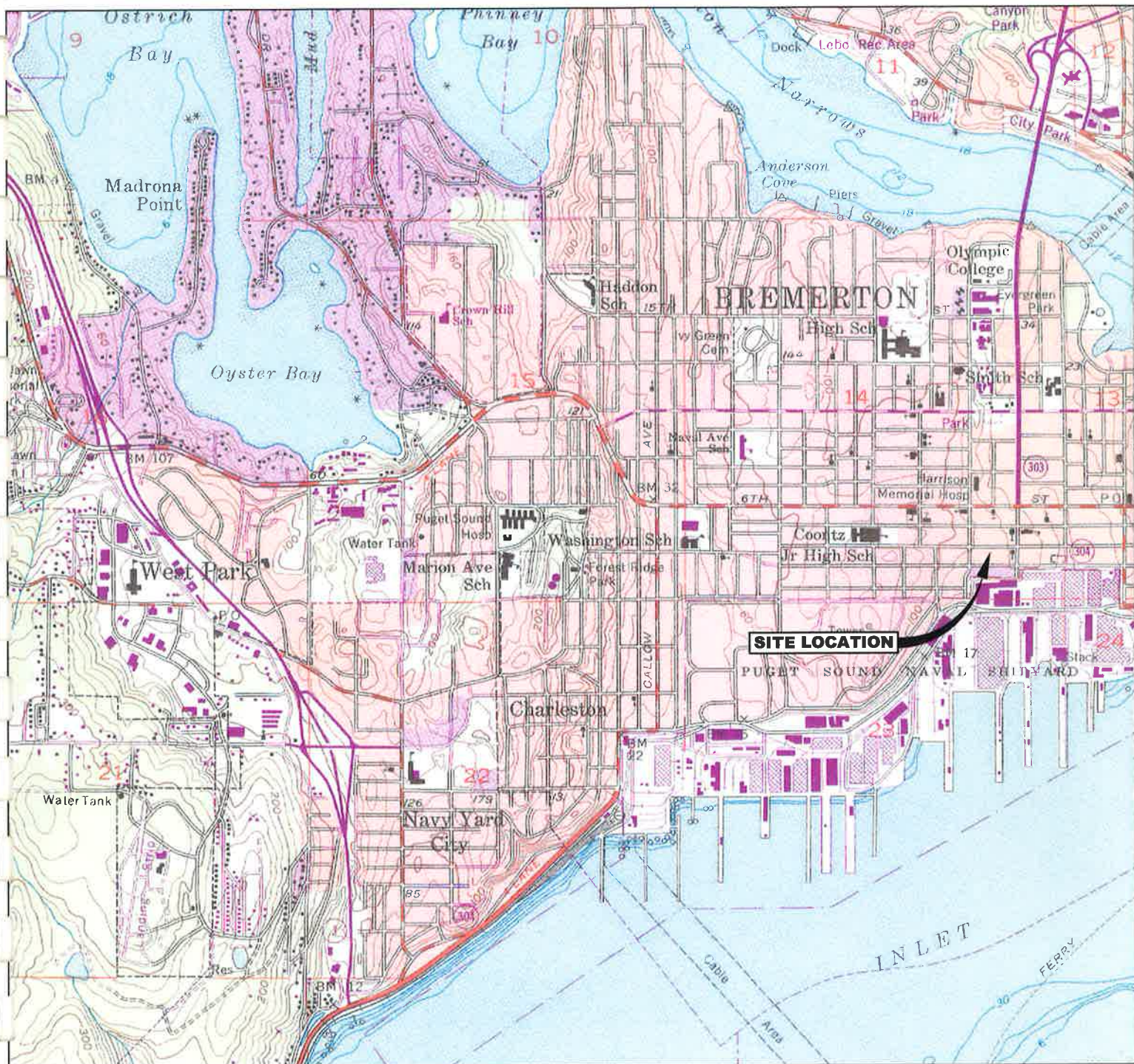
- **Accuracy of Information.** Certain information used by Farallon in this report/assessment has been obtained, reviewed, and evaluated from various sources believed to be reliable, including the previously discussed interviews. Although Farallon's conclusions, opinions, and recommendations are based in part on such information, Farallon's services did not include the verification of its accuracy or authenticity. Should such information prove to be inaccurate or unreliable, Farallon reserves the right to amend or revise its conclusions, opinions, and/or recommendations.
- **Reconnaissance.** Farallon performed a reconnaissance of the Site that is the subject of this report/assessment to document current conditions. Farallon focused on areas deemed more likely to exhibit hazardous materials conditions, while other areas received limited attention or were inaccessible at the time of our reconnaissance.

FIGURES

ADDITIONAL SUBSURFACE INVESTIGATION AND FEASIBILITY TESTING REPORT TCP ID#NW1243

**Former City Hand Laundry Property
1002 4th Street
Bremerton, Washington**

Farallon PN: 603-001



REFERENCE: 7.5 MINUTE USGS QUADRANGLE BREMERTON WEST, WASHINGTON. DATED 1953 AND PHOTOREVISED 1981



WASHINGTON



FARALLON CONSULTING
320 3rd Ave. NE
Issaquah, WA 98027

FIGURE 1

SITE LOCATION MAP
FORMER CITY HAND LAUNDRY SITE
1002 4TH STREET
BREMERTON, WASHINGTON

FARALLON PN: 603-001

Drawn By: QDD

Checked By: PJ

Date: 4/7/04

Disk Reference: 603001

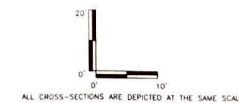
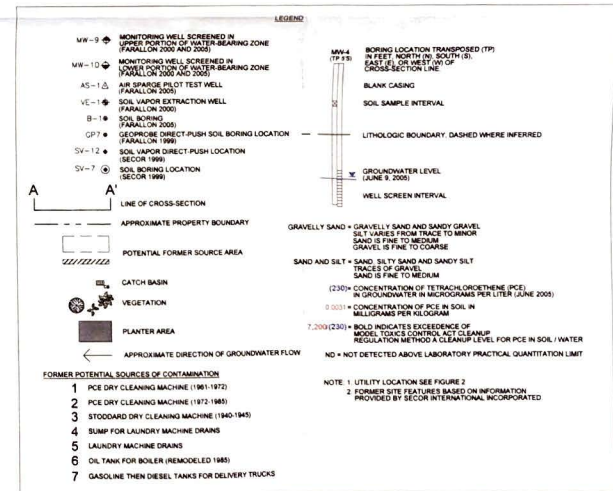
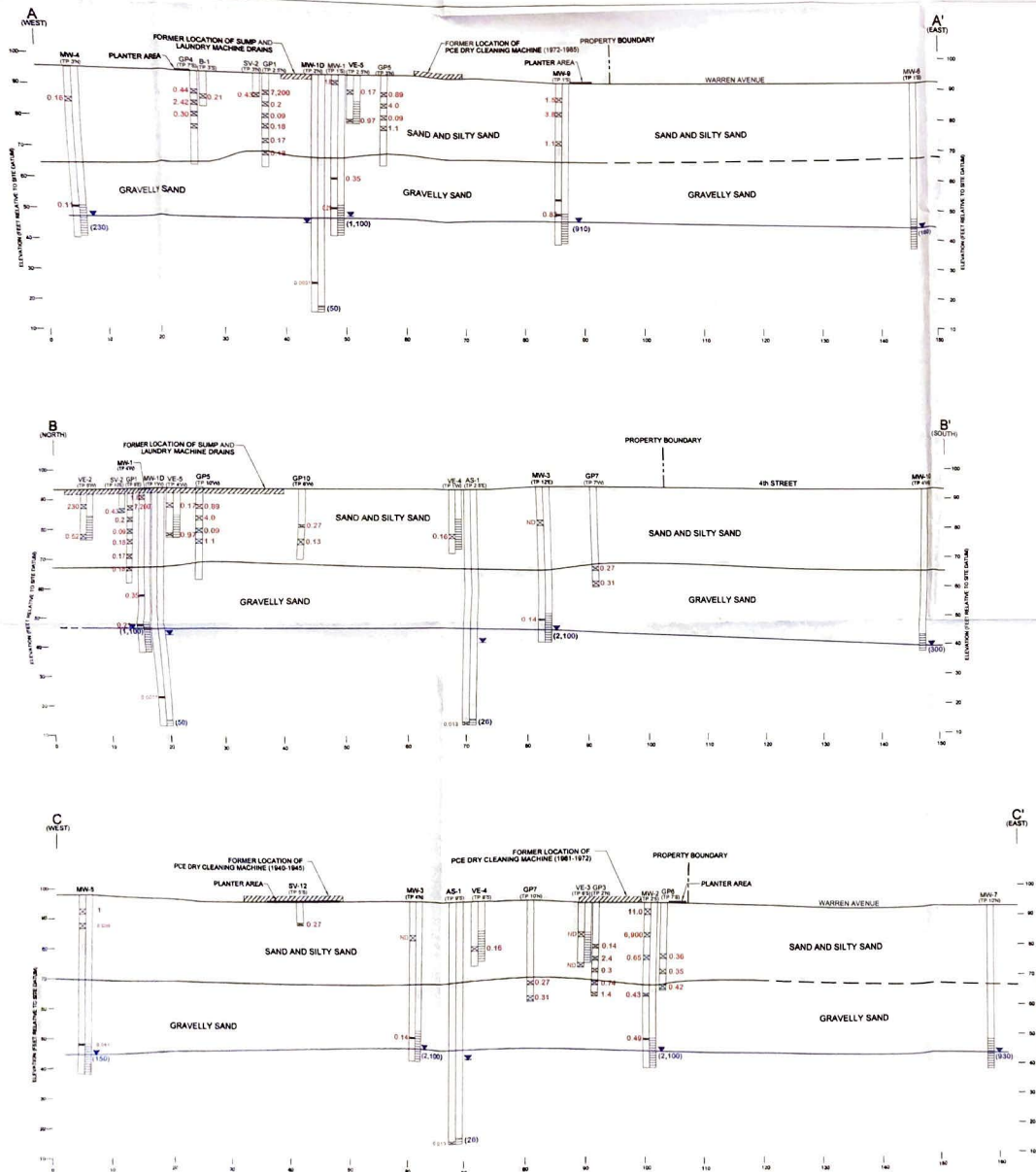
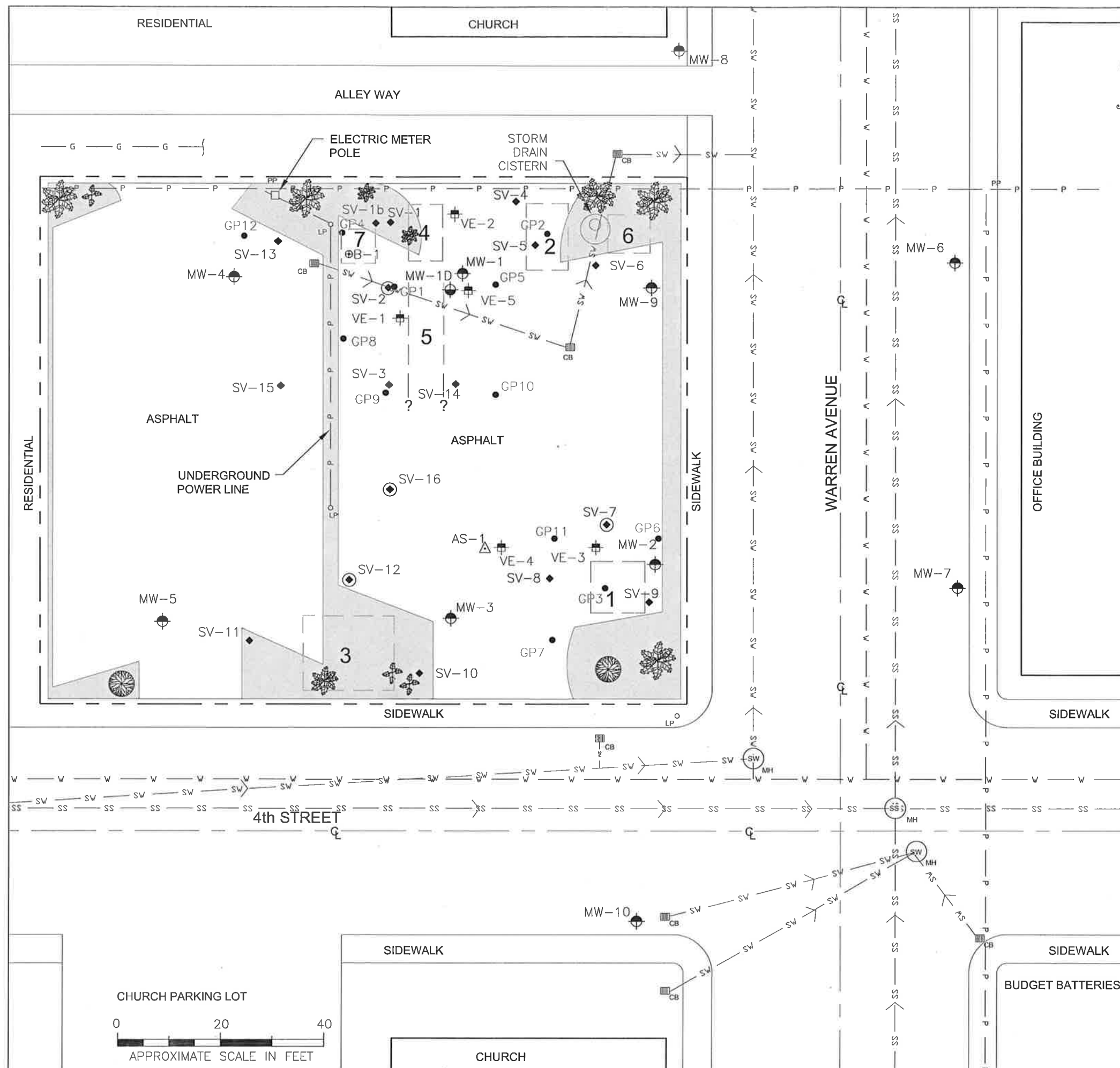


FIGURE 4

CROSS-SECTION A-A', B-B', AND C-C'
FORMER CITY HAND LAUNDRY PROPERTY
1002 4TH STREET
BREMERTON, WASHINGTON

FARALLON CONSULTING
300 3rd Ave., NW
Bremerton, WA 98311
Phone: 360-853-0038
Fax: 360-853-0039
Email: info@farallon.com
Website: www.farallon.com

Drawn By: CEM [Checked By: CEM] Date: 9/19/2010 Date: 9/19/2010



FORMER POTENTIAL SOURCES OF CONTAMINATION

- 1 PCE DRY CLEANING MACHINE (1961-1972)
- 2 PCE DRY CLEANING MACHINE (1972-1985)
- 3 STODDARD DRY CLEANING MACHINE (1940-1945)
- 4 SUMP FOR LAUNDRY MACHINE DRAINS
- 5 LAUNDRY MACHINE DRAINS
- 6 OIL TANK FOR BOILER (REMODELED 1985)
- 7 GASOLINE THEN DIESEL TANKS FOR TRUCKS

LEGEND

- MW-9 MONITORING WELL SCREENED IN UPPER PORTION OF WATER-BEARING ZONE (FARALLON 2000 AND 2005)
- MW-1D MONITORING WELL SCREENED IN LOWER PORTION OF WATER-BEARING ZONE (FARALLON 2000 AND 2005)
- AS-1 AIR SPARGE PILOT TEST WELL (FARALLON 2005)
- B-1 SOIL BORING (FARALLON 2005)
- GP7 GEOPROBE DIRECT-PUSH SOIL BORING LOCATION (FARALLON 1999)
- SV-12 SOIL VAPOR DIRECT-PUSH SOIL LOCATION (SECOR 1999)
- SV-12 SOIL BORING LOCATION (SECOR 1999)
- APPROXIMATE SITE BOUNDARY
- SANITARY SEWER LINE & DIRECTION OF FLOW
- STORMWATER LINE & DIRECTION OF FLOW
- WATER LINE
- POWER LINE
- GAS LINE
- SANITARY SEWER MAN HOLE
- STORMWATER MAN HOLE
- FIRE HYDRANT
- LIGHT POLE
- POWER POLE
- CATCH BASIN
- VEGETATION
- POTENTIAL FORMER SOURCE AREA

NOTE: (1) FORMER SITE FEATURES BASED ON INFORMATION PROVIDED BY SECOR INTERNATIONAL INCORPORATED.
(2) UTILITY LOCATIONS ARE APPROXIMATE.

FIGURE 2

SITE PLAN SHOWING EXISTING FEATURES AND FORMER POTENTIAL SOURCE AREAS
FORMER CITY HAND LAUNDRY PROPERTY
1002 4TH STREET
BREMERTON, WASHINGTON

FARALLON CONSULTING
320 3rd Avenue NE
Issaquah, WA 98027

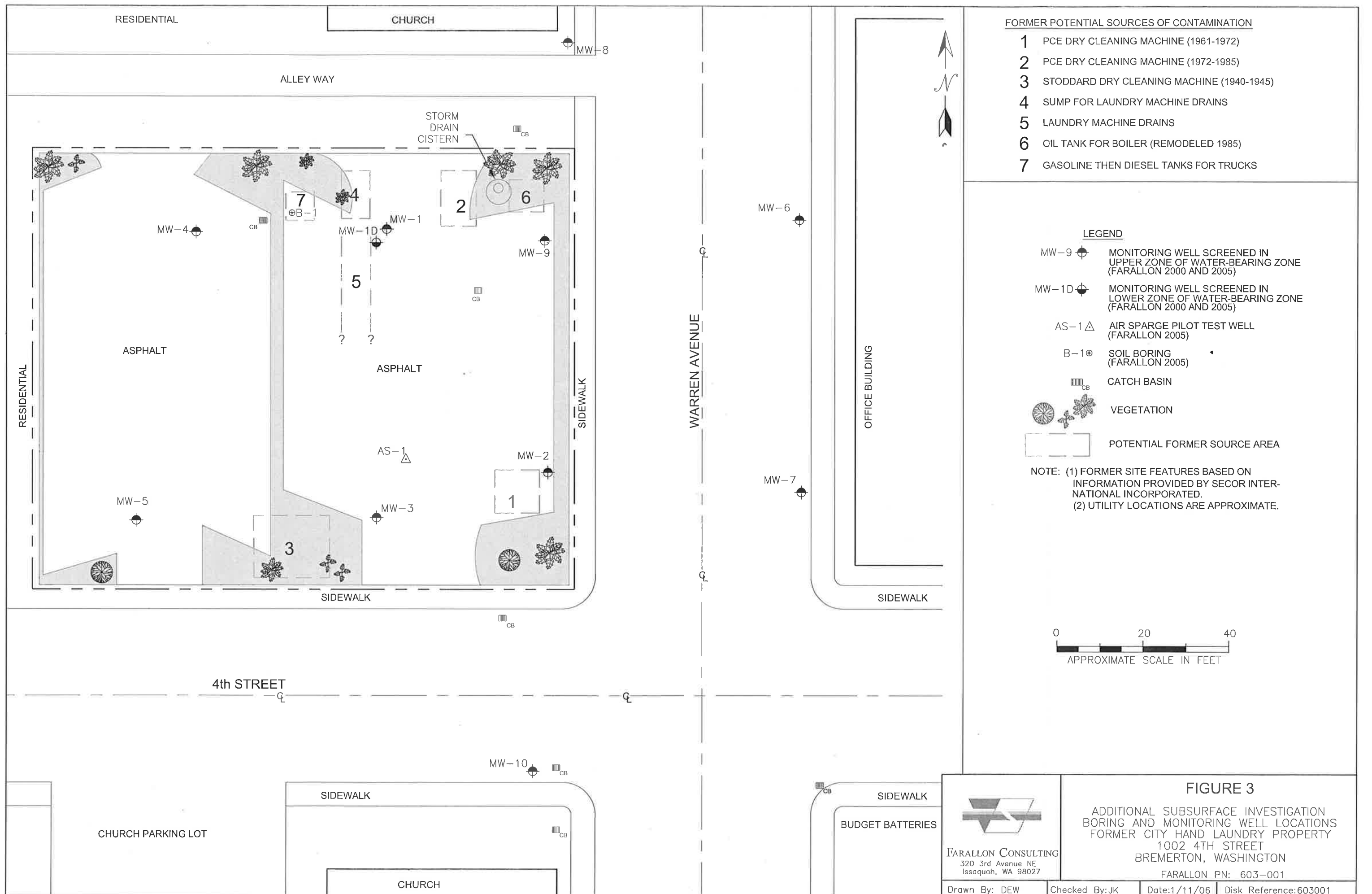
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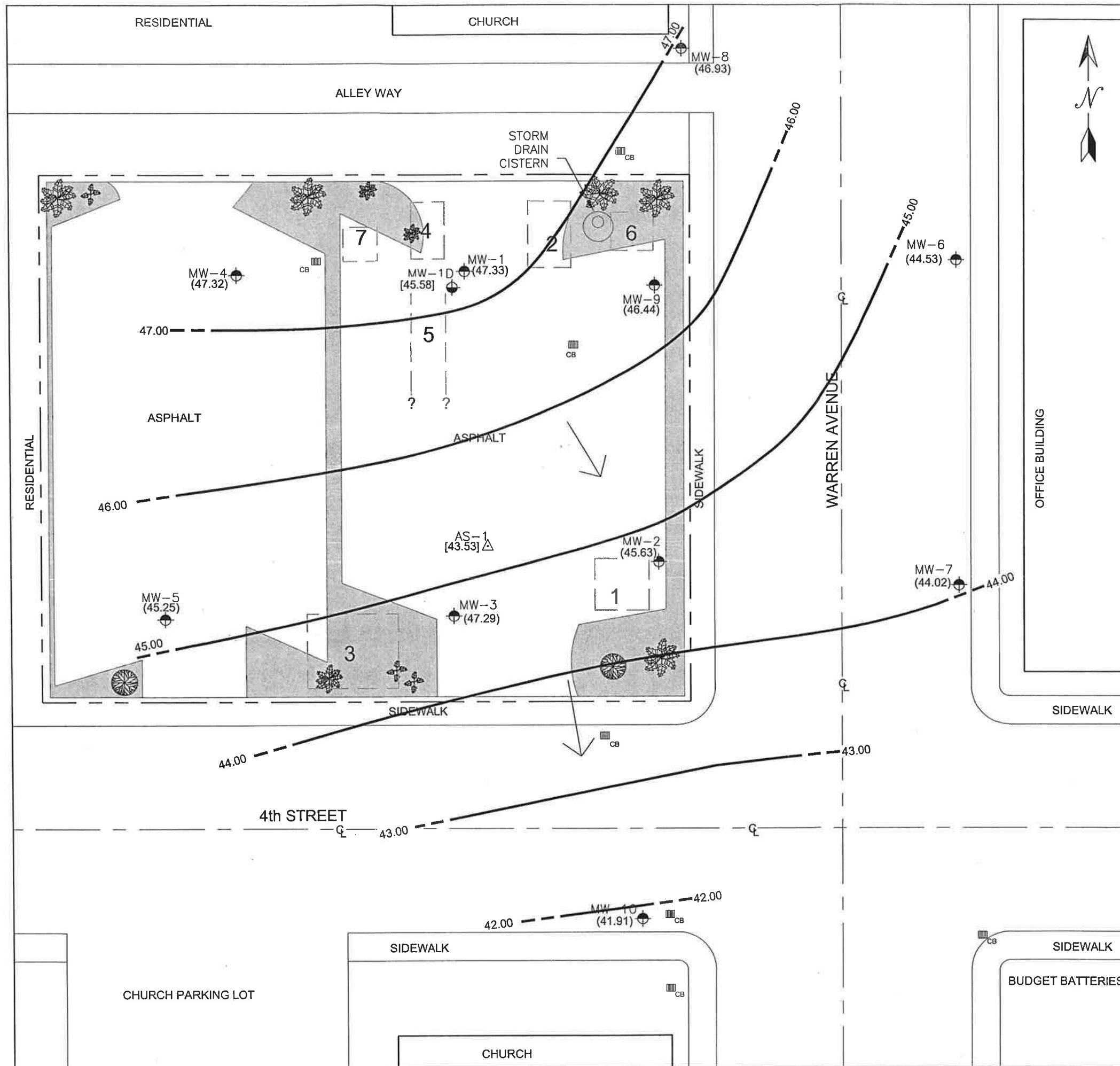
Drawn By: DEW

Checked By: JK

Date: 1/11/06

Disk Reference: 603001





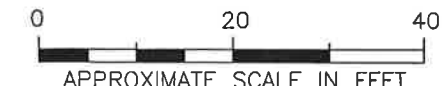
FORMER POTENTIAL SOURCES OF CONTAMINATION

- 1 PCE DRY CLEANING MACHINE (1961-1972)
- 2 PCE DRY CLEANING MACHINE (1972-1985)
- 3 STODDARD DRY CLEANING MACHINE (1940-1945)
- 4 SUMP FOR LAUNDRY MACHINE DRAINS
- 5 LAUNDRY MACHINE DRAINS
- 6 OIL TANK FOR BOILER (REMODELED 1985)
- 7 GASOLINE THEN DIESEL TANKS FOR TRUCKS

LEGEND

- MW-9 MONITORING WELL SCREENED IN UPPER ZONE OF WATER-BEARING ZONE (FARALLON 2000 AND 2005)
- MW-1D MONITORING WELL SCREENED IN LOWER ZONE OF WATER-BEARING ZONE (FARALLON 2000 AND 2005)
- AS-1 AIR SPARGE PILOT TEST WELL (FARALLON 2005)
- (44.02) UPPER PORTION OF THE WATER BEARING ZONE GROUNDWATER LEVEL ELEVATION RELATIVE TO ARBITRARY ON-SITE DATUM OF 100 FEET
- [43.53] LOWER PORTION OF THE WATER BEARING ZONE GROUNDWATER LEVEL ELEVATION RELATIVE TO ARBITRARY ON-SITE DATUM OF 100 FEET (NOT CONSIDERED IN GROUNDWATER ELEVATION CONTOURS)
- ESTIMATED DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER ELEVATION CONTOUR LINE
- APPROXIMATE PROPERTY BOUNDARY
- CATCH BASIN
- VEGETATION
- POTENTIAL FORMER SOURCE AREA

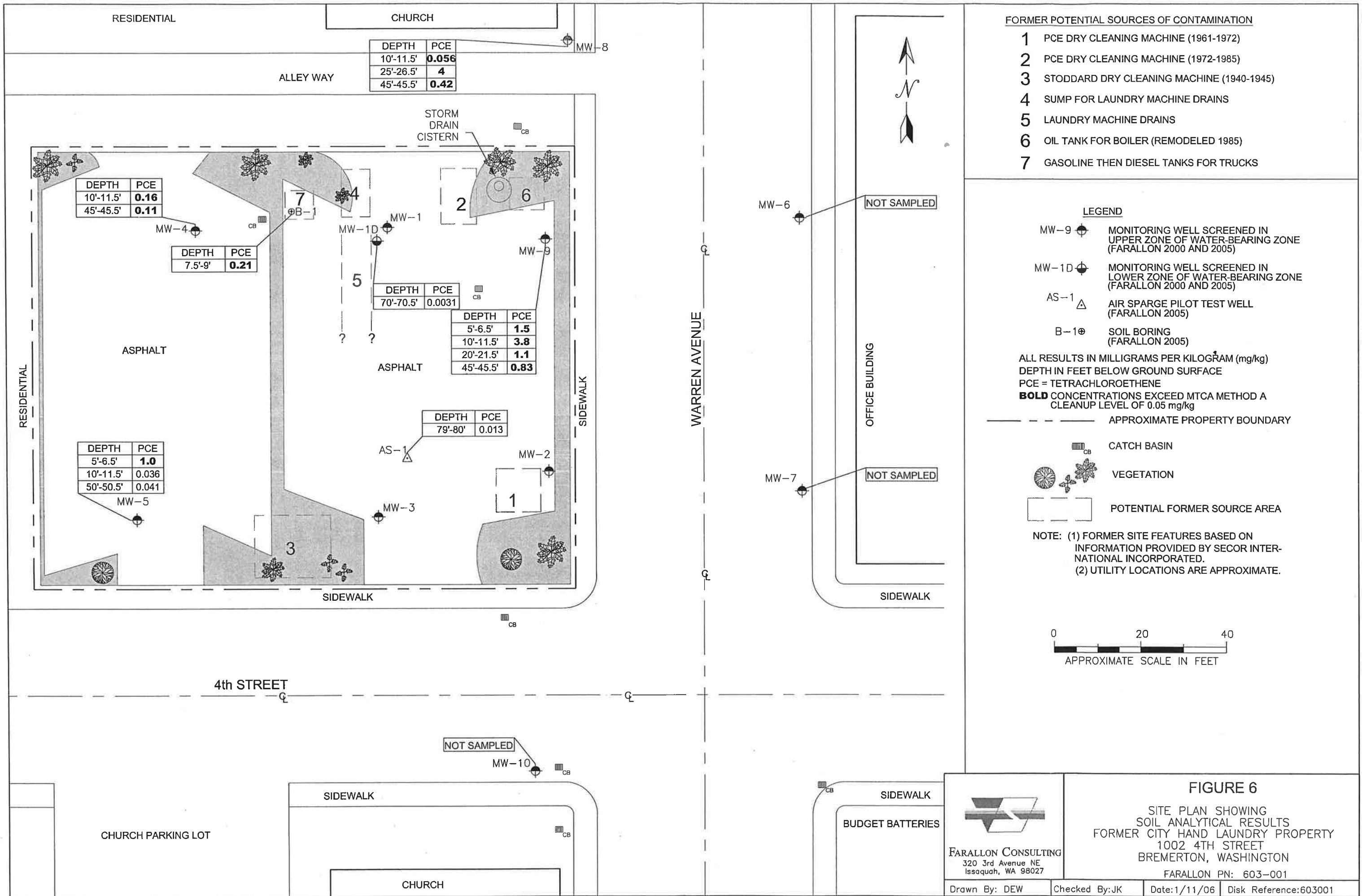
NOTE: (1) GROUNDWATER ELEVATION FOR MONITORING WELL MW-3 NOT EVALUATED IN CALCULATION OF GROUNDWATER FLOW DIRECTION
(2) FORMER SITE FEATURES BASED ON INFORMATION PROVIDED BY SECOR INTERNATIONAL INCORPORATED.

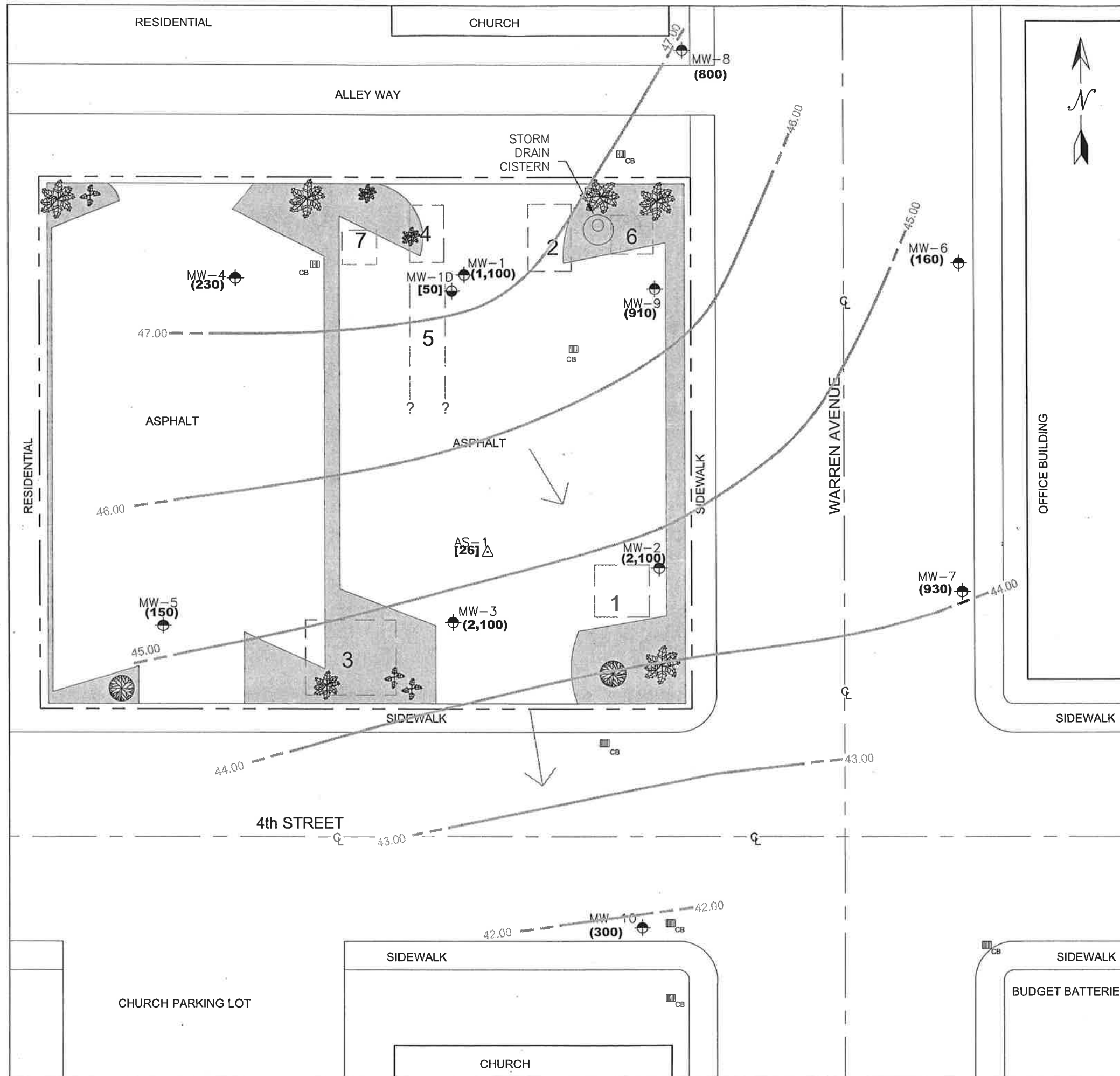


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Issaquah, WA 98027

FIGURE 5
SITE PLAN SHOWING GROUNDWATER
SURFACE ELEVATION CONTOURS (6/9/2005)
FORMER CITY HAND LAUNDRY PROPERTY
1002 4TH STREET
BREMERTON, WASHINGTON
FARALLON PN: 603-001

Drawn By: DEW Checked By: JK Date: 1/11/06 Disk Reference: 603001





FORMER POTENTIAL SOURCES OF CONTAMINATION

- 1 PCE DRY CLEANING MACHINE (1961-1972)
- 2 PCE DRY CLEANING MACHINE (1972-1985)
- 3 STODDARD DRY CLEANING MACHINE (1940-1945)
- 4 SUMP FOR LAUNDRY MACHINE DRAINS
- 5 LAUNDRY MACHINE DRAINS
- 6 OIL TANK FOR BOILER (REMODELED 1985)
- 7 GASOLINE THEN DIESEL TANKS FOR TRUCKS

LEGEND

- MW-9 MONITORING WELL SCREENED IN UPPER ZONE OF WATER-BEARING ZONE (FARALLON 2000 AND 2005)
- MW-1D MONITORING WELL SCREENED IN LOWER ZONE OF WATER-BEARING ZONE (FARALLON 2000 AND 2005)
- AS-1 AIR SPARGE PILOT TEST WELL (FARALLON 2005)

PCE = TETRACHLOROETHENE

ALL RESULTS IN MICROGRAMS PER LITER ug/L

BOLD CONCENTRATIONS EXCEED MTCA METHOD A CLEANUP LEVEL OF 5 ug/L

(160) CONCENTRATION OF PCE IN GROUNDWATER

[50] CONCENTRATION OF PCE IN DEEP MONITORING/AIRSPARGE PILOT TEST WELL

ESTIMATED DIRECTION OF GROUNDWATER FLOW

GROUNDWATER ELEVATION CONTOUR LINE

APPROXIMATE PROPERTY BOUNDARY

CATCH BASIN

VEGETATION

POTENTIAL FORMER SOURCE AREA

NOTE: (1) FORMER SITE FEATURES BASED ON INFORMATION PROVIDED BY SECOR INTERNATIONAL INCORPORATED.

0 20 40
APPROXIMATE SCALE IN FEET

FIGURE 7

SITE PLAN SHOWING GROUNDWATER ANALYTICAL RESULTS
FORMER CITY HAND LAUNDRY PROPERTY
1002 4TH STREET
BREMERTON, WASHINGTON

FARALLON PN: 603-001

FARALLON CONSULTING
320 3rd Avenue NE
Issaquah, WA 98027

Drawn By: DEW

Checked By: JK

Date: 1/11/06

Disk Reference: 603001

TABLES

ADDITIONAL SUBSURFACE INVESTIGATION AND FEASIBILITY TESTING REPORT TCP ID#NW1243

**Former City Hand Laundry Property
1002 4th Street
Bremerton, Washington**

Farallon PN: 603-001

Table 1
Summary of Historical
Soil Analytical Results
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Sample Location	Sample Number	Sampled By	Date Sampled	Depth (feet) ¹	Analytical Results (milligrams per kilogram)							
					PCE ²	TCE ²	cis-1,2 DCE ²	trans-1,2 DCE ²	1,1 DCE ²	Vinyl Chloride ²	DRO/ORO ³	BTEX ⁴
1998 to 1999 Site Investigations												
SV-2	SV-2	SECOR	5/30/1998	8	0.43	ND	ND	ND	ND	ND	-	ND
SV-7	SV-7	SECOR	5/30/1998	9	0.68	ND	ND	ND	ND	ND	-	ND
SV-12	SV-12	SECOR	5/30/1998	8	0.27	ND	ND	ND	ND	ND	-	ND
SV-16	SV-16	SECOR	5/30/1998	8	0.4	ND	ND	ND	ND	ND	-	ND
GP-1	GP1-6	Farallon	9/24/1999	6	7,200	30	14	0.32	ND	ND	-	-
GP-1	GP1-10	Farallon	9/24/1999	10	0.2	ND	ND	ND	ND	ND	-	-
GP-1	GP1-14	Farallon	9/24/1999	14	0.09	0.17	ND	0.08	ND	ND	-	-
GP-1	GP1-17.5	Farallon	9/24/1999	17.5	0.18	ND	ND	ND	ND	ND	-	-
GP-1	GP1-22	Farallon	9/24/1999	22	0.17	ND	0.16	ND	ND	ND	-	-
GP-1	GP1-26	Farallon	9/24/1999	26	0.18	0.16	ND	0.07	ND	ND	-	-
GP-2	GP2-6	Farallon	9/24/1999	6	0.45	ND	ND	ND	ND	ND	-	-
GP-2	GP2-10	Farallon	9/24/1999	10	0.46	ND	ND	ND	ND	ND	-	-
GP-2	GP2-14	Farallon	9/24/1999	14	0.15	0.19	0.11	ND	ND	ND	-	-
GP-2	GP2-18	Farallon	9/24/1999	18	0.4	0.24	ND	ND	ND	ND	-	-
GP-2	GP2-22	Farallon	9/24/1999	22	0.28	0.12	ND	0.07	ND	ND	-	-
GP-2	GP2-26	Farallon	9/24/1999	26	0.28	0.07	ND	ND	ND	ND	-	-
GP-3	GP3-14	Farallon	9/24/1999	14	0.14	0.19	0.06	ND	ND	ND	-	-
GP-3	GP3-18	Farallon	9/24/1999	18	2.4	0.1	ND	0.07	ND	ND	-	-
GP-3	GP3-22	Farallon	9/24/1999	22	0.3	0.07	ND	0.07	ND	ND	-	-
GP-3	GP3-26	Farallon	9/24/1999	26	0.74	0.17	ND	0.08	ND	ND	-	-
GP-3	GP3-30	Farallon	9/24/1999	30	1.4	ND	ND	ND	ND	ND	-	-
GP-4	GP4-6	Farallon	9/24/1999	6	0.44	ND	0.07	ND	ND	ND	-	-
GP-4	GP4-10	Farallon	9/24/1999	10	2.42	0.24	ND	ND	ND	ND	-	-
GP-4	GP4-14	Farallon	9/24/1999	14	0.30	ND	ND	ND	ND	ND	-	-
GP-4	GP4-18	Farallon	9/24/1999	18	ND	ND	ND	ND	ND	ND	-	-
GP-5	GP5-6	Farallon	9/24/1999	6	0.89	ND	ND	ND	ND	ND	-	-
GP-5	GP5-10	Farallon	9/24/1999	10	4.00	0.08	ND	ND	ND	ND	-	-
GP-5	GP5-14	Farallon	9/24/1999	14	0.09	ND	ND	ND	ND	ND	-	-
GP-5	GP5-18	Farallon	9/25/1999	18	1.10	ND	ND	ND	ND	ND	-	-
GP-6	GP6-17	Farallon	9/25/1999	17	0.36	0.10	ND	ND	ND	ND	-	-
GP-6	GP6-22	Farallon	9/25/1999	22	0.35	ND	ND	ND	ND	ND	-	-
GP-6	GP6-27	Farallon	9/25/1999	27	0.42	ND	ND	ND	ND	ND	-	-
GP-7	GP7-27	Farallon	9/25/1999	27	0.27	ND	ND	ND	ND	ND	-	-
GP-7	GP7-32	Farallon	9/25/1999	32	0.31	ND	ND	ND	ND	ND	-	-
GP-8	GP8-12	Farallon	9/25/1999	12	0.30	ND	ND	ND	ND	ND	-	-
GP-8	GP8-17	Farallon	9/25/1999	17	0.14	ND	ND	ND	ND	ND	-	-
GP9	GP9-12	Farallon	9/25/1999	12	0.23	ND	ND	ND	ND	ND	-	-
GP9	GP9-17	Farallon	9/25/1999	17	0.30	ND	ND	ND	ND	ND	-	-
GP10	GP10-12	Farallon	9/25/1999	12	0.27	ND	ND	ND	ND	ND	-	-
GP10	GP10-17	Farallon	9/25/1999	17	0.13	ND	ND	ND	ND	ND	-	-
GP11	GP11-7	Farallon	9/25/1999	7	0.55	ND	ND	ND	ND	ND	-	-
MTCA Cleanup Levels					0.05 ⁵	0.03 ⁵	800 ⁶	1,600 ⁶	1.67 ⁶	0.667 ⁶	2,000 ⁵	0.03/7/6/9 ⁵

Table 1
Summary of Historical
Soil Analytical Results
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Sample Location	Sample Number	Sampled By	Date Sampled	Depth (feet) ¹	Analytical Results (milligrams per kilogram)							
					PCE ²	TCE ²	cis-1,2 DCE ²	trans-1,2 DCE ²	1,1 DCE ²	Vinyl Chloride ²	DRO/ORO ³	BTEX ⁴
2000 Site Investigation												
MW-1	MW1-2.5 -3.5	Farallon	7/7/2000	2.5 - 3.5	1.8	ND	ND	ND	ND	ND	-	-
MW-1	MW1-35 - 35.5	Farallon	7/7/2000	35 - 35.5	0.35	ND	ND	ND	ND	ND	-	-
MW-1	MW1-45 - 45.5	Farallon	7/7/2000	45 - 45.5	0.21	ND	ND	ND	ND	ND	-	-
MW-2	MW2-2.5 - 4	Farallon	7/6/2000	2.5 - 4	11.0	ND	ND	ND	ND	ND	-	-
MW-2	MW2-10 - 11.5	Farallon	7/6/2000	10 - 11.5	6,900	ND	ND	ND	ND	ND	-	-
MW-2	MW2-17.5 - 19	Farallon	7/6/2000	17.5 - 19	0.65	ND	ND	ND	ND	ND	-	-
MW-2	MW2-30 - 31	Farallon	7/6/2000	30 - 31	0.43	ND	ND	ND	ND	ND	-	-
MW-2	MW2-45-45.5	Farallon	7/6/2000	45 - 45.5	0.49	ND	ND	ND	ND	ND	-	-
MW-3	MW3-7.5 - 9	Farallon	7/5/2000	7.5 - 9	-	-	-	-	-	-	ND	-
MW-3	MW3-12.5 - 14	Farallon	7/5/2000	12.5 - 14	ND	ND	ND	ND	ND	ND	-	-
MW-3	MW3-45 - 45.5	Farallon	7/5/2000	45 - 45.5	0.14	ND	ND	ND	ND	ND	-	-
VE-1	VE1- 7.5 - 9	Farallon	7/7/2000	7.5 - 9	0.18	ND	ND	ND	ND	ND	-	-
VE-1	VE1- 15 - 16.5	Farallon	7/7/2000	15 - 16.5	0.13	ND	ND	ND	ND	ND	-	-
VE-2	VE2- 5 - 6.5	Farallon	7/6/2000	5 - 6.5	230	ND	ND	ND	ND	ND	-	-
VE-2	VE2- 15 - 16.5	Farallon	7/6/2000	15 - 16.5	0.52	ND	ND	ND	ND	ND	-	-
VE-3	VE3- 10 - 11.5	Farallon	7/5/2000	10 - 11.5	ND	ND	ND	ND	ND	ND	-	-
VE-3	VE3- 20 - 21.5	Farallon	7/5/2000	20 - 21.5	ND	ND	ND	ND	ND	ND	-	-
VE-4	VE4-15 - 16.5	Farallon	7/6/2000	15 - 16.5	0.16	ND	ND	ND	ND	ND	-	-
VE-5	VE5- 5 - 6.5	Farallon	7/6/2000	5 - 6.5	0.17	ND	ND	ND	ND	ND	-	-
VE-5	VE5 - 15 - 16	Farallon	7/6/2000	15 - 16	0.97	ND	ND	ND	ND	ND	-	-
MTCA Cleanup Levels					0.05 ⁵	0.03 ⁵	800 ⁶	1,600 ⁶	1.67 ⁶	0.667 ⁶	2,000 ⁵	0.03/7/6/9 ⁵

NOTES:

Results in **BOLD** denote concentrations above MTCA cleanup levels.

¹Depth in feet below ground surface.

²Analyzed by United States Environmental Protection Agency (EPA) Method 8021B or 8260.

³Analyzed by Washington State Department of Ecology (Ecology)-approved Method NWTPH-Dx.

⁴Analyzed by EPA Method 8020.

⁵Ecology Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels, Chapter 173-340 of the Washington Administrative Code, Amended February 12, 2001, Table 740-1, Method A Soil Cleanup Levels for Unrestricted Land Uses.

⁶MTCA Cleanup Levels and Risk Calculations under MTCA (CLARC), Updated November 2001, Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway.

- = not analyzed

BTEX = benzene, toluene, ethylbenzene, and xylenes

DCE = dichloroethene

DRO/ORO = Total petroleum hydrocarbons as diesel-range organics / oil-range organics

ND = Indicates compound not detected above the laboratory practical quantitation limit

PCE = tetrachloroethene

TCE = trichloroethene

Table 2
Summary of Groundwater Surface Elevations
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Monitoring Well Number	Screened Interval (feet below ground surface)	Top of Casing Elevation (feet) ²	Date Measured	Depth to Water (feet) ¹	Groundwater Elevation (feet) ²
MW-1	45-55	93.84	7/19/2000	44.47	49.37
			4/25/2003	45.23	48.61
			6/9/2005	46.51	47.33
MW-1D	78-80	95.33	6/9/2005	49.75	45.58
MW-2	45-55	95.24	7/19/2000	46.90	48.34
			4/25/2003	47.72	47.52
			6/9/2005	49.61	45.63
MW-3	45-55	96.18	7/19/2000	46.85	49.33
			4/25/2003	47.64	48.54
		96.2 ³	6/9/2005	48.91	47.29
MW-4	45-55	95.72	6/9/2005	48.4	47.32
MW-5	50-60	98.55	6/9/2005	53.3	45.25
MW-6	45-55	92.24	6/9/2005	47.71	44.53
MW-7	46-56	93.51	6/9/2005	49.49	44.02
MW-8	45-55	91.94	6/9/2005	45.01	46.93
MW-9	45-55	93.88	6/9/2005	47.44	46.44
MW-10	50-60	95.22	6/9/2005	53.31	41.91
AS-1	78-80	95.28	6/9/2005	51.75	43.53

NOTES:

¹ Depth below top of well casing in feet.

² Relative to arbitrary datum of 100.00 feet

³ Elevation re-surveyed during 2005 investigation.

Table 3
Summary of Soil Analytical Results - Halogenated Volatile Organic Compounds
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Sample Location	Sample Number	Date Sampled	Depth (feet) ¹	Analytical Results (milligrams per kilogram) ²					
				PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1 DCE	Vinyl Chloride
B-1	B1-7.5-9	5/8/2005	7.5-9	0.21	0.0091	0.012	<0.00093	<0.00093	<0.00093
MW-1D	MW1D-70-70.5	5/8/2005	70-70.5	0.0031	<0.00081	<0.00081	<0.00081	<0.00081	<0.00081
MW-4	MW4-10-11.5	5/7/2005	10-11.5	0.16	0.0019	0.0015	<0.00093	<0.00093	<0.00093
MW-4	MW4-45-45.5	5/7/2005	45-45.5	0.11	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095
MW-5	MW5-5-6.5	5/7/2005	5-6.5	1.0 ³	<0.00084	<0.00084	<0.00084	<0.00084	<0.00084
MW-5	MW5-10-11.5	5/7/2005	10-11.5	0.036	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
MW-5	MW5-50-50.5	5/7/2005	50-50.5	0.041	<0.00079	<0.00079	<0.00079	<0.00079	<0.00079
MW-8	MW8-10-11.5	5/9/2005	10-11.5	0.056	<0.00097	<0.00097	<0.00097	<0.00097	<0.00097
MW-8	MW8-25-26.5	5/9/2005	25-26.5	4	0.0022	0.004	<0.00086	<0.00086	<0.00086
MW-8	MW8-45-45.5	5/9/2005	45-45.5	0.42	0.0023	0.0045	<0.00093	<0.00093	<0.00093
MW-9	MW9-5-6.5	5/8/2005	5-6.5	1.5	<0.00073	<0.00073	<0.00073	<0.00073	<0.00073
MW-9	MW9-10-11.5	5/8/2005	10-11.5	3.8	0.021	0.022	<0.00069	<0.00069	<0.00069
MW-9	MW9-20-21.5	5/8/2005	20-21.5	1.1	0.0024	0.0031	<0.00061	<0.00061	<0.00061
MW-9	MW9-45-45.5	5/8/2005	45-45.5	0.83	0.0028	0.0047	<0.00081	<0.00081	<0.00081
AS-1	AS1-79-80	5/7/2005	79-80	0.013	<0.00095	<0.00095	<0.00095	<0.00095	<0.00095
MTCA Cleanup Levels				0.05 ⁴	0.03 ⁴	800 ⁵	1,600 ⁵	1.67 ⁵	0.667 ⁵

NOTES:

Results in **BOLD** denote concentrations above MTCA cleanup levels.

< indicates concentrations not detected above the stated laboratory reporting limit.

¹ Depth in feet below ground surface.

² Analyzed by United States Environmental Protection Agency (EPA) Method 8021B or 8260.

³ Laboratory analytical report that the value reported exceeds the quantitation range and is an estimate.

⁴ Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels, Chapter 173-340 of the Washington Administrative Code, Amended February 12, 2001, Table 740-1, Method A Soil Cleanup Levels for Unrestricted Land Uses.

⁵ MTCA Cleanup Levels and Risk Calculations under MTCA (CLARC), Updated November 2001, Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway.

DCE = dichloroethene

PCE = tetrachloroethene

TCE = trichloroethene

Table 4
Summary of Soil Analytical Results - Total Petroleum Hydrocarbons
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Sample Location	Sample Number	Date Sampled	Depth (feet) ¹	Analytical Results (milligrams per kilogram)						
				GRO ³	DRO ⁴	ORO ⁴	Benzene ⁵	Toluene ⁵	Ethylbenzene ⁵	Total Xylenes ⁵
B-1	B1-5-6.5	5/8/2005	5-6.5	8.9 ⁶	<31	<63	<0.02	<0.065	<0.065	<0.065
B-1	B1-7.5-9	5/8/2005	7.5-9	<5.7	<28	<57	<0.02	<0.057	<0.057	<0.057
B-1	B1-10-11.5	5/8/2005	10-11.5	<5.6	<27	<53	<0.02	<0.056	<0.056	<0.056
MW-8	MW8-10-11.5	5/9/2005	10-11.5	<26	<64	<130	-	-	-	-
MW-9	MW9-5-6.5	5/8/2005	5-6.5	-	<29	<58	-	-	-	-
MW-9	MW9-10-11.5	5/8/2005	10-11.5	-	<31	<61	-	-	-	-
MTCA Method A Cleanup Levels⁷				100	2,000	2,000	0.03	7	6	9

NOTES:

Results in **BOLD** denote concentrations above MTCA cleanup levels.

< indicates concentrations not detected above the stated laboratory reporting limit.

¹ Depth in feet below ground surface.

³ Analyzed by Northwest Method NWTPH-HCID or NWTPH-Gx.

⁴ Analyzed by Northwest Method NWTPH-HCID or NWTPH-Dx.

⁵ Analyzed by U.S. Environmental Protection Agency Method 8021B.

⁶ Laboratory analytical report denotes that result is mainly attributed to a single peak (tetrachloroethene).

⁷ Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels, Chapter 173-340 of the Washington Administrative Code, Amended February 12, 2001, Table 740-1, Method A Soil Cleanup Levels for Unrestricted Land Uses.

GRO = total petroleum hydrocarbons as gasoline-range hydrocarbons

DRO = total petroleum hydrocarbons as diesel-range organics

ORO = total petroleum hydrocarbons as oil-range organics

"- " Not analyzed

Table 5
Summary of Groundwater Quality Parameters
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Monitoring Well Identification	Sample Identification	Date Sampled	Temperature (°C)	Specific Conductance (mS/cm)	pH	Dissolved Oxygen (mg/l)	Turbidity (NTUs)	Oxidation Reduction Potential (mV)	Total Calcium (µg/l)	Total Iron (µg/l)	Total Manganese (µg/l)
MW-1	MW-1	7/19/2000	IE	0.8	6.3	8.5	-	155.0	-	-	-
	MW-1	4/25/2003	13.1	0.2	6.6	13.3	0.1	102.0	-	-	-
	MW1-061005	6/10/2005	14.5	0.2	6.3	9.1	-	129.1	-	-	-
MW-1D	MW1D-061005	6/10/2005	14.3	0.3	7.3	0.9	-	90.8	18,000	11,000	590
MW-2	MW-2	7/19/2000	IE	0.8	5.6	7.6	-	190.0	-	-	-
	MW-2	4/25/2003	14.0	0.2	6.3	15.2	0.2	99.3	-	-	-
	MW2-060905	6/9/2005	13.7	0.2	5.5	8.1	-	129.6	-	-	-
MW-3	MW-3	7/19/2000	IE	3.6	6.4	6.7	-	161.0	-	-	-
	MW-3	4/25/2003	13.4	0.2	6.3	13.1	0.1	128.6	-	-	-
	MW3-061005	6/10/2005	14.4	0.2	6.6	8.6	-	114.7	-	-	-
MW-4	MW4-060905	6/9/2005	14.2	0.1	5.7	8.4	-	113.7	-	-	-
MW-5	MW5-060905	6/9/2005	15.2	0.2	5.7	9.3	-	122.5	-	-	-
MW-6	MW6-061005	6/10/2005	14.0	0.2	5.8	7.5	-	133.3	-	-	-
MW-7	MW7-060905	6/9/2005	14.9	0.3	6.7	8.2	-	78.3	-	-	-
MW-8	MW8-061005	6/10/2005	13.8	0.2	6.4	8.7	-	128.1	-	-	-
MW-9	MW9-061005	6/10/2005	13.7	0.2	7.2	8.8	-	105.2	-	-	-
MW-10	MW10-060905	6/9/2005	14.8	0.2	5.7	6.7	-	118.1	-	-	-
AS-1	AS1-061005	6/10/2005	14.5	0.3	7.1	2.6	-	95.2	20,000	9,200	940

NOTES:

- indicates parameter not measured/analyzed.

°C = degrees Celsius

IE = instrument error

µg/l = micrograms per liter

mg/l = milligrams per liter

mS/cm = milliSiemens per centimeter

mV = millivolts

NTU = nephelometric turbidity units

Table 6
Summary of Groundwater Analytical Results - Halogenated Volatile Organic Compounds
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Monitoring Well Identification	Sample Identification	Date Sampled	Analytical Results (micrograms per liter) ¹								
			PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1 DCE	Vinyl Chloride	Trichlorofluoromethane	1,1,1-TCA	Chloroform
MW-1	MW-1	7/19/2000	560	<10	<10	<10	<10	<10	<10	<10	<10
	MW-1	4/25/2003	1,600	5.6	8.1	0.87	<0.20	<0.20	<0.20	<0.20	0.26
	MW1-061005	6/10/2005	1,100	<10	<10	<10	<10	<10	<10	<10	<10
MW-1D	MW1D-061005	6/10/2005	50	0.3	0.25	<0.20	<0.20	<0.20	<0.20	<0.20	2
MW-2	MW-2	7/19/2000	1,100	<10	<10	<10	<10	<10	<10	<10	<10
	MW-2	4/25/2003	3,700	3.0	1.0	<0.20	<0.20	<0.20	0.27	0.32	0.61
	MW2-060905	6/9/2005	2,100	<10	<10	<10	<10	<10	<10	<10	<10
MW-3	MW-3	7/19/2000	1,300	<10	<10	<10	<10	<10	<10	<10	<10
	MW-3	4/25/2003	3,100	2.2	0.42	<0.20	<0.20	<0.20	0.33	0.40	0.61
	MW3-061005	6/10/2005	2,100	<10	<10	<10	<10	<10	<10	<10	<10
MW-4	MW4-060905	6/9/2005	230	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-5	MW5-060905	6/9/2005	150	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-6	MW6-061005	6/10/2005	160	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-7	MW7-060905	6/9/2005	930	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
MW-8	MW8-061005	6/10/2005	800	5.9	11	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
MW-9	MW9-061005	6/10/2005	910	<4.0	6.5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
MW-10	MW10-060905	6/9/2005	300	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
AS-1	AS1-061005	6/10/2005	26	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.6
MTCA Cleanup Levels			5²	5²	80³	160³	0.0729³	0.2²	2,400³	200²	7.17³

NOTES:

Results in **BOLD** denote concentrations above the specified MTCA cleanup level.

< denotes analyte not detected above the stated laboratory reporting limit.

¹ Analyzed by U.S. Environmental Protection Agency Method 8260B.

² Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels, Chapter 173-340 of the Washington Administrative Code, Amended February 12, 2001, Table 720-1, Method A Cleanup Levels for Groundwater.

³ MTCA Cleanup Levels and Risk Calculations under MTCA (CLARC), Updated November 2001, Standard Method B Formula Values for Potable Ground Water.

DCE = dichloroethene

PCE = tetrachloroethene

TCE = trichloroethene

1,1,1-TCA = 1,1,1-trichloroethane

Table 7
Summary of Groundwater Analytical Results - Total Petroleum Hydrocarbons
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

Monitoring Well Identification	Sample Identification	Date Sampled	Analytical Results (micrograms per liter)						
			GRO ¹	DRO ²	ORO ²	Benzene ³	Toluene ³	Ethylbenzene ³	Total Xylenes ³
MW-1	MW-1	7/19/2000	-	-	-	-	-	-	-
	MW-1	4/25/2003	-	-	-	-	-	-	-
	MW1-061005	6/10/2005	<100	<260	<410	<1.0	<1.0	<1.0	<1.0
MW-2	MW-2	7/19/2000	-	-	-	-	-	-	-
	MW-2	4/25/2003	-	-	-	-	-	-	-
	MW2-060905	6/9/2005	<100	-	-	<1.0	<1.0	<1.0	<1.0
MW-3	MW-3	7/19/2000	1,000 ¹	-	-	<1.0	-	-	-
	MW-3	4/25/2003	-	-	-	-	-	-	-
	MW3-061005	6/10/2005	<100	-	-	<1.0	<1.0	<1.0	<1.0
MW-4	MW4-060905	6/9/2005	<100	-	-	<1.0	<1.0	<1.0	<1.0
MW-5	MW5-060905	6/9/2005	<100	-	-	<1.0	<1.0	<1.0	<1.0
MW-6	MW6-061005	6/10/2005	<100	-	-	<1.0	<1.0	<1.0	<1.0
MW-7	MW7-060905	6/9/2005	<100	-	-	<1.0	<1.0	<1.0	<1.0
MW-8	MW8-061005	6/10/2005	<100	<260	<410	<1.0	<1.0	<1.0	<1.0
MW-9	MW9-061005	6/10/2005	<100	<250	<400	<1.0	<1.0	<1.0	<1.0
MW-10	MW10-060905	6/9/2005	<100	-	-	<1.0	<1.0	<1.0	<1.0
MTCA Method A Cleanup Levels ⁴			800	500	500	5	1,000	700	1,000

NOTES:

< denotes analyte not detected above the stated laboratory practical reporting limit.

¹Analyzed by Northwest Method NWTPH-Gx.

²Analyzed by Northwest Method NWTPH-Dx.

³Analyzed by U.S. Environmental Protection Agency 8021B.

⁴Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels, Chapter 173-340 of the Washington Administrative Code, amended February 12, 2001, Table 720-1, Method A Cleanup Levels for Groundwater.

" - " not analyzed

DRO = total petroleum hydrocarbons as diesel-range organics

GRO = total petroleum hydrocarbons as gasoline-range hydrocarbons

ORO = total petroleum hydrocarbons as oil-range organics

**APPENDIX A
BORING/WELL CONSTRUCTION LOGS**

**ADDITIONAL SUBSURFACE INVESTIGATION
AND FEASIBILITY TESTING REPORT
TCP ID#NW1243**

**Former City Hand Laundry Property
1002 4th Street
Bremerton, Washington**

Farallon PN: 603-001

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

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

ppm = Parts per Million

USCS = Unified Soil Classification System



FARALLON CONSULTING

320 3rd Avenue NE
Issaquah, WA 98027

Log of Boring: MW-4

Page 1 of 2

Client: Stuart and Patricia Milbrad
Project: Former City Hand Laundry
Location: Bremerton, Washington

Farallon PN: 603-001

Logged By: J. Schmitt

Date/Time Started: 5/7/05 0700
Date/Time Completed: 5/7/05 1030
Equipment: CME 75
Drilling Company: Cascade Drilling
Drilling Foreman: Scott Krueger
Drilling Method: Hollow Stem Auger

Sampler Type: SS 18"x3"
Drive Hammer (lbs.): 300
Depth of Water ATD (ft bgs): 48
Total Boring Depth (ft bgs): 55.5
Total Well Depth (ft bgs): 5

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (units)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0-2" Asphalt	AC							
5		Silty SAND, fine to medium, with fine angular gravel, trends to trace gravel, brown, medium dense, moist, no odor.	SM		90	10/10/11	0	MW4-5-6.5		Concrete
10		SAND, fine to medium, trace silt, brown with mottling, medium dense, moist, no odor.	SP		100	12/13/13	0	MW4-10-11.5		Bentonite
15		SAND, fine with lenses of silty sand, brown, medium dense, moist, no odor.	SM		100	12/13/13	NA	MW4-15-16.5		PVC Blank
20		Silty SAND, fine with lenses of fine sand, brown, medium dense, moist, no odor.	SM		80	12/13/15	0	MW4-20-21.5		
25		SAND, fine to medium, trace silt, brown, medium dense, moist, no odor.	SP		70	12/15/15	0	MW4-25-26.5		
30										

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 45-55

Well Construction Information

Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



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
30		SAND, fine to coarse, with fine to coarse rounded gravel, minor silt, brown, dense, moist, no odor.	SP-SM		80	4/5/50-5	0	MW4-30-31.5		 Bentonite PVC Blank Sandpack Screen
35		SAND, fine to coarse, with fine to coarse rounded gravel, trace silt, brown, very dense, moist, no odor.	SP		80	50-6	0	MW4-35-35.5		
40		GRAVEL, fine to coarse, rounded, with fine to coarse sand, brown, very dense, moist, no odor.	GP		80	50-6	0	MW4-40-40.5		
45		GRAVEL, fine to coarse, rounded, with fine to coarse sand, brown, very dense, moist, no odor.	GP		100	50-6	0	MW4-45-45.5		
50		GRAVEL, fine to coarse, with fine to coarse sand, brown, very dense, wet, no odor.	GP		100	50-5	0.5	MW4-50-50.5		
55		GRAVEL mostly fine to coarse, with sand, fine to coarse, brown, very dense, wet, no odor.	GP		100	50-5	1.1	MW4-55-55.5		

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 45-55

Well Construction Information

Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



FARALLON CONSULTING
320 3rd Avenue NE
Issaquah, WA 98027

Log of Boring: MW-5

Page 1 of 2

Client: Stuart and Patricia Milbrad
Project: Former City Hand Laundry
Location: Bremerton, Washington

Farallon PN: 603-001

Logged By: J. Schmitt

Date/Time Started: 5/7/05 1100
Date/Time Completed: 5/7/05 1350
Equipment: CME 75
Drilling Company: Cascade Drilling
Drilling Foreman: Scott Krueger
Drilling Method: Hollow Stem Auger

Sampler Type: SS 18"x 3"
Drive Hammer (lbs.): 300
Depth of Water ATD (ft bgs): 54
Total Boring Depth (ft bgs): 60
Total Well Depth (ft bgs): 60

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (units)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0	0-2"	Asphalt	ASPHALT							
5	5-6.5'	SAND, fine to medium, trace silt, brown, medium dense, moist, no odor.	SP		100	9/10/10	0.0	MW5-5-6.5		Concrete
10	10-11.5'	SAND, fine to coarse, trace fine rounded gravel, trace silt, brown, medium dense, moist, no odor.	SP		100	13/13/14	0.0	MW5-10-11.5		Bentonite
15	15-16.5'	SAND, fine to coarse, trace fine rounded to subrounded gravel, medium dense, moist, no odor. Encountered 1" thick silt stringer at 16.0'.	SM		100	14/15/15	0.0	MW5-15-16.5		PVC Blank
20	20-21.5'	SAND, fine to coarse, trace silt, trace fine rounded gravel, medium dense, moist, no odor.	SP		100	12/13/14	NA	MW5-20-21.5		
25	25-26.5'	Silty SAND, fine to medium, interbedded with stringers of sandy silt, brown, medium dense, moist, no odor.	SM		100	13/15/15	NA	MW5-25-26.5		
30										

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 50-60

Well Construction Information
Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



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
30		30-31.5' GRAVEL, fine to coarse, with fine to coarse sand, trace to minor silt, brown, dense, moist, no odor.	GP		70	25/35/20	NA	MW5-30-31.5		 Bentonite PVC Blank Sandpack Screen
35		35-35.5' GRAVEL, fine to coarse, subrounded to angular, with fine to coarse sand, trace to minor silt, brown, very dense, moist, no odor.	GP		90	50-5	NA	MW5-35-35.5		
40		40-40.5' GRAVEL, fine to coarse, with fine to medium sand, trace silt, brown, very dense, moist, no odor.	GP		100	50-6	NA	MW5-40-40.5		
45		45-45.5' Rock in shoe, no recovery.	GP		0	50-5	NA			
50		50-50.5' GRAVEL, with sand and silt, brown, very dense, moist, no odor.	GM		100	50-6	NA	MW5-50-50.5		
55		55-55.5' GRAVEL, fine to coarse, with fine to coarse sand, brown, very dense, wet, no odor.	GP		100	50-6	NA	MW5-55-55.5		
60		59.5-60' SAND, fine to medium, trace rounded gravel, brown, very dense, wet, no odor.	SP		100	50-6	NA	MW5-59.5-60		

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 50-60

Well Construction Information
Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



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320 3rd Avenue NE
Issaquah, WA 98027

Log of Boring: MW-8

Page 1 of 2

Client: Stuart and Patricia Milbrad
Project: Former City Hand Laundry
Location: Bremerton, Washington

Farallon PN: 603-001

Logged By: J. Schmitt

Date/Time Started: 5/9/2005 1330
Date/Time Completed: 5/9/2005 1630
Equipment: CME 75
Drilling Company: Cascade Drilling
Drilling Foreman: Scott Krueger
Drilling Method: Hollow Stem Auger

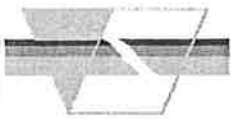
Sampler Type: SS 18"x 3"
Drive Hammer (lbs.): 300
Depth of Water ATD (ft bgs): 48
Total Boring Depth (ft bgs): 55.5
Total Well Depth (ft bgs): 55

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (units)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0-5' Air Knife/Vacuum excavated.								
5		5-6.5' SILT, trace fine sand, brown with orange mottling, medium stiff, moist, no odor.	ML		100	4/5/5	NA	MW8-5-6.5		Concrete
10		10-11.5' SILT, trace fine sand, brown with orange mottling, medium stiff, moist, no odor.	ML		100	10/10/11	NA	MW8-10-11.5		Bentonite
15		15-16.5' SAND, fine to medium, greyish brown, medium dense, moist, no odor.	SP		80	15/18/20	NA	MW8-15-16.5		
20		20-21.5' SAND, fine to medium, greyish brown, medium dense, moist, no odor.	SP		60	13/15/18	NA	MW8-20-21.5		PVC Blank
25		25-26.5' SAND, fine to medium, with fine to coarse gravel, greyish brown, medium dense, slightly moist, no odor.	SP		75	30/32/35	NA	MW8-25-26.5		
30										

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 45-55

Well Construction Information
Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



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
30		30-30.5' Sandy GRAVEL, fine to coarse, subrounded to subangular, greyish brown, very dense, slightly moist, no odor.	GP		100	50-6	NA	MW8-30-30.5		 Bentonite PVC Blank Sandpack Screen
35		35-35.5' Sandy GRAVEL, fine to coarse, subrounded to subangular, minor silt, greyish brown, very dense, slightly moist, no odor.	GP		100	50-5	NA	MW8-35-35.5		
40		40-40.5' SAND, fine to medium, with fine to coarse subrounded to subangular gravel, minor silt, grey brown, very dense, moist, no odor.	SP		100	50-6	NA	MW8-40-40.5		
45		45-45.5' GRAVEL, fine to coarse, subrounded to subangular, with fine to medium sand, minor silt (nodules), greyish brown, very dense, moist, no odor.	GP-GM		100	50-6	NA	MW8-45-45.5		
50		50-50.5' Sandy GRAVEL, fine to coarse, rounded, minor silt, brown, very dense, wet. Low recovery, rock in shoe.	GP-GM		15	50-6	NA	MW8-50-50.5		
55		55-55.5' Sandy GRAVEL, fine to coarse, with silt, brown, dense, wet, no odor.	GM		100	50-6	NA	MW8-55-55.5		

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 45-55

Well Construction Information

Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



FARALLON CONSULTING
320 3rd Avenue NE
Issaquah, WA 98027

Log of Boring: MW-9

Page 1 of 2

Client: Stuart and Patricia Milbrad
Project: Former City Hand Laundry
Location: Bremerton, Washington

Farallon PN: 603-001

Logged By: J. Schmitt

Date/Time Started:
Date/Time Completed: 9/16/03 1725
Equipment: CME 75
Drilling Company: Cascade Drilling
Drilling Foreman: Scott Krueger
Drilling Method: Hollow Stem Auger

Sampler Type: SS 18"x 3"
Drive Hammer (lbs.): 300
Depth of Water ATD (ft bgs): 48
Total Boring Depth (ft bgs): 55.5
Total Well Depth (ft bgs): 55.0

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (units)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0-2" Asphalt.	AC							
		2.5-4' Sandy SILT, fine sand, yellow/brown with orange mottling, medium stiff, moist, no odor.	ML		100	4/5/5	1143	MW9-2.5-4		Concrete
5		5-6.5' Silty SAND, fine, with stringers of sandy silt, yellowish brown with orange mottling, medium stiff, moist, no odor.	SM		100	4/5/5	1495	MW9-5-6.5		
10		10-11.5' Silty SAND, fine, light greyish brown, medium dense, moist, no odor.	SM		100	12/15/16	751	MW9-10-11.5		Bentonite
15		15-16.5' SAND, fine to medium, with silt, (silty-fine sand stringers), greyish brown, medium dense, moist, no odor.	SM		100	11/12/12	850	MW9-15-16.5		
20		20-21.5' SAND, fine to medium (trending to fine), trace silt, greyish brown, medium dense, moist, no odor.	SP		75	14/15/15	1910	MW9-20-21.5		PVC Blank
25		25-26.5' SAND, fine to medium, trace to minor silt, trace gravel, brown, medium dense, moist, no odor.	SP		80	12/13/15	3000+	MW9-25-26.5		
30										

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 45-55

Well Construction Information
Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



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
30		30-31.5' Gravelly SAND, fine to medium, gravel is fine, rounded, trace silt, moist, dense, no odor.	SP		100	30/42/50-4	685	MW9-30-31.5		
35		35-35.5' Gravelly SAND, fine to medium, gravel mostly fine, subrounded to subangular, trace silt, moist, dense, no odor.	SP		100	50-6	930	MW9-35-35.5		
40		40-40.5' Sandy GRAVEL, fine to coarse, rounded, trace silt, brown, moist, very dense, no odor.	GP		100	50-6	1190	MW9-40-40.5		
45		45-45.5' Sandy GRAVEL, fine to coarse, subrounded to subangular, trace silt, brown, moist, very dense, no odor.	GP		100	50-6	1320	MW9-45-45.5		
50		50-50.5' Sandy GRAVEL, fine to coarse, subrounded to subangular, trace silt, brown, wet, very dense, no odor.	GP		60	50-5	271	MW9-50-50.5		
55		55-55.5' Sandy GRAVEL, mostly fine to coarse, minor silt, brown, wet, dense, no odor.	GP-GM		100	50-6	640	MW9-55-55.5		

Monument Type: Flush Mount

Casing Diameter (inches): 2-inch

Screen Slot Size (inches): 0.010

Screened Interval (ft bgs): 45-55

Well Construction Information
Filter Pack: 2/12 Monterey Sand

Surface Seal: Concrete

Annular Seal: Bentonite

Ground Surface Elevation (ft): NA

Top of Casing Elevation (ft): NA

Boring Abandonment: NA

Surveyed Location: X: NA Y: NA



FARALLON CONSULTING
320 3rd Avenue NE
Issaquah, WA 98027

Log of Boring: MW-1D

Page 1 of 2

Client: Stuart and Patricia Milbrad
Project: Former City Hand Laundry
Location: Bremerton, Washington

Farallon PN: 603-001

Logged By: J. Schmitt

Date/Time Started:	5/8/05 1100	Sampler Type:	SS 18"x 3"
Date/Time Completed:	5/8/05 1500	Drive Hammer (lbs.):	300
Equipment:	CME 75	Depth of Water ATD (ft bgs):	48
Drilling Company:	Cascade Drilling	Total Boring Depth (ft bgs):	80
Drilling Foreman:	Scott Krueger	Total Well Depth (ft bgs):	80
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (units)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0										Concrete
5										
10										
15										Bentonite
20		Lithology not logged, see boring log for MW-1	NA		NA	NA	NA	NA		
25										
30										PVC Blank
35										
40										

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 78-80

Well Construction Information
Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



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
40										
45										Bentonite
50		Gravelly SAND, fine to coarse, sand is fine to coarse, rounded, wet, brown, very dense, slight odor.	SP		NA	NA	NA	MW1D-50-51.5		
55		Silty GRAVEL, with sand, brown, very dense	GM		NA	NA	NA	MW1D-55-55.5		
60		SAND, fine to medium, minor silt, very dense, slight odor	GP-GM		NA	NA	NA	MW1D-60-60.5		
65		SAND, fine to coarse, with fine gravel, minor silt (silt nodules), very dense, slight odor	SP-SM		NA	NA	NA	MW1D-65-65.5		
70		GRAVEL, with sand and silt, wet, dense, slight odor	GM		NA	NA	NA	MW1D-70-70.5		
75		GRAVEL, with sand, minor silt, wet, dense, slight odor	GP-GM		NA	NA	NA	MW1D-72.5-73		
75		Sandy GRAVEL, fine to coarse, sand is fine to coarse, trace silt, wet, very dense, no odor	GP		NA	NA	NA	MW1D-75-75.5		
80		Gravelly SAND, medium to coarse, gravel is fine to coarse, very dense, no odor	SP		NA	NA	NA	MW1D-79.5-80		
										PVC Blank
										Sandpack
										Screen

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 78-80

Well Construction Information
Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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



FARALLON CONSULTING

320 3rd Avenue NE
Issaquah, WA 98027

Log of Boring: AS-1

Page 1 of 2

Client: Stuart and Patricia Milbrad
Project: Former City Hand Laundry
Location: Bremerton, Washington

Farallon PN: 603-001

Logged By: J. Schmitt

Date/Time Started:

Date/Time Completed:

Equipment:

Drilling Company:

Drilling Foreman:

Drilling Method:

Sampler Type: SS 18"x 3"

Drive Hammer (lbs.): 300

Depth of Water ATD (ft bgs): 49

Total Boring Depth (ft bgs): 80

Total Well Depth (ft bgs): 80

Hollow Stem Auger

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (units)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0										Concrete
5										
10										Bentonite
15										
20		Lithology not logged, see boring log for VE-4.			NA	NA	NA	NA		
25										
30										PVC Blank
35										
40										

Monument Type: Flush Mount

Casing Diameter (inches): 2-inch

Screen Slot Size (inches): 0.010

Screened Interval (ft bgs): 78-80

Well Construction Information

Filter Pack: 2/12 Monterey Sand

Surface Seal: Concrete

Annular Seal: Bentonite

Ground Surface Elevation (ft): NA

Top of Casing Elevation (ft): NA

Boring Abandonment: NA

Surveyed Location: X: NA

Y: NA



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
40										Bentonite
45		Lithology not logged, see boring log for VE-4.			NA	NA	NA	NA		
50										
55										
60		GRAVEL, fine to coarse, with fine to coarse sand, minor silt, wet, very dense, brown, no odor.	GP-GM		NA	NA	NA	AS1-60-61		
65		GRAVEL, fine to coarse, with fine to coarse sand, trace silt, wet, very dense, brown, no odor.	GP		NA	NA	NA	AS1-65-65.5		
70		GRAVEL, fine to coarse, trace coarse sand, wet, very dense, grey, no odor.	GP		NA	NA	NA	AS1-70-70.5		
75		Lithology not logged.	GP		NA	NA	NA	AS1-75-75.5		
80		SAND, medium to coarse, trace fine to coarse gravel, wet, very dense, brown, no odor.	SP		NA	NA	NA	AS1-79-80		
										PVC Blank
										Sandpack
										Screen

Monument Type: Flush Mount
Casing Diameter (inches): 2-inch
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 78-80

Well Construction Information
Filter Pack: 2/12 Monterey Sand
Surface Seal: Concrete
Annular Seal: Bentonite

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

APPENDIX B
LABORATORY ANALYTICAL REPORTS

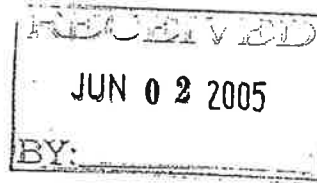
**ADDITIONAL SUBSURFACE INVESTIGATION
AND FEASIBILITY TESTING REPORT**
TCP ID#NW1243

**Former City Hand Laundry Property
1002 4th Street
Bremerton, Washington**

Farallon PN: 603-001



**OnSite
Environmental Inc.**
Analytical Testing and Mobile Laboratory Services



May 19, 2005

Jeff Kaspar
Farallon Consulting, LLC
320 3rd Avenue NE, Suite 200
Issaquah, WA 98027

Re: Analytical Data for Project 603-001
Laboratory Reference No. 0505-059

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 9, 2005.

Please note that the subcontracted data will follow in a later report.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

Case Narrative

Samples were collected on May 7 and 8, 2005 and received by the laboratory on May 9, 2005. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in preweighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The gasoline result for sample B1-5-6.5 is mainly attributed to a single peak (PCE).

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Halogenated Volatiles EPA 8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in preweighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The value reported for Tetrachloroethene for sample MW5-5-6.5 exceeds the quantitation range and is therefore an estimate. The sample was analyzed by low-level method with Tetrachloroethene exceeding the calibration range. The sample was next analyzed by high-level method with a non-detect result for Tetrachloroethene. The sample was reanalyzed by low-level method with a significantly lower result for Tetrachloroethene than the initial low-level analysis. The sampling site appears to be non-homogenous. The highest level of Tetrachloroethene detected is being reported.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

NWTPH-Gx/BTEX

Date Extracted: 5-10-05
Date Analyzed: 5-11-05

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **B1-5-6.5**
Lab ID: 05-059-46

B1-7.5-9
05-059-47

	Result	Flags	PQL	Result	Flags	PQL
Benzene	ND		0.020	ND		0.020
Toluene	ND		0.065	ND		0.057
Ethyl Benzene	ND		0.065	ND		0.057
m,p-Xylene	ND		0.065	ND		0.057
o-Xylene	ND		0.065	ND		0.057
TPH-Gas	8.9	Z	6.5	ND		5.7
Surrogate Recovery: Fluorobenzene	77%			77%		

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

NWTPH-Gx/BTEX

Date Extracted: 5-10-05
Date Analyzed: 5-11-05

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **B1-10-11.5**
Lab ID: 05-059-48

	Result	Flags	PQL
Benzene	ND		0.020
Toluene	ND		0.056
Ethyl Benzene	ND		0.056
m,p-Xylene	ND		0.056
o-Xylene	ND		0.056
TPH-Gas	ND		5.6
Surrogate Recovery: Fluorobenzene	90%		

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

**NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL**

Date Extracted: 5-10-05

Date Analyzed: 5-10-05

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0510S2

	Result	Flags	PQL
Benzene	ND		0.020
Toluene	ND		0.050
Ethyl Benzene	ND		0.050
m,p-Xylene	ND		0.050
o-Xylene	ND		0.050
TPH-Gas	ND		5.0
Surrogate Recovery: Fluorobenzene	89%		

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

**NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL**

Date Extracted: 5-10-05
Date Analyzed: 5-10&11-05

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	05-068-02 Original	05-068-02 Duplicate	RPD	Flags
Benzene	ND	ND	NA	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
TPH-Gas	ND	ND	NA	
Surrogate Recovery:				
Fluorobenzene	80%	86%		

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

**NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL**

Date Extracted: 5-10-05
Date Analyzed: 5-10-05

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.45

Lab ID:	05-068-01 MS	Percent Recovery	05-068-01 MSD	Percent Recovery	RPD	Flags
Benzene	2.50	102	2.53	103	1	
Toluene	2.55	104	2.58	105	1	
Ethyl Benzene	2.57	105	2.59	105	1	
m,p-Xylene	2.56	105	2.57	105	0	
o-Xylene	2.57	105	2.59	106	0	

Surrogate Recovery:

Fluorobenzene	85%	85%
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Date of Report: May 19, 2005
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Project: 603-001

NWTPH-Dx

Date Extracted: 5-12-05
Date Analyzed: 5-12-05

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	MW9-5-6.5	MW9-10-11.5	B1-5-6.5
Lab ID:	05-059-29	05-059-30	05-059-46
Diesel Range:	ND	ND	ND
PQL:	29	31	31
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	58	61	63
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	147%	124%	131%
Flags:	Y	Y	Y

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

NWTPH-Dx

Date Extracted: 5-12-05
Date Analyzed: 5-12-05

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	B1-7.5-9	B1-10-11.5
Lab ID:	05-059-47	05-059-48

Diesel Range:	ND	ND
PQL:	28	27
Identification:	---	---

Lube Oil Range:	ND	ND
PQL:	57	53
Identification:	---	---

Surrogate Recovery		
o-Terphenyl:	123%	130%

Flags:	Y	Y
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Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
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Project: 603-001

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted: 5-12-05
Date Analyzed: 5-12-05

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0512S1

Diesel Range: **ND**
PQL: 25
Identification: ---

Lube Oil Range: **ND**
PQL: 50
Identification: ---

Surrogate Recovery
o-Terphenyl: 142%

Flags: Y

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 5-12-05
Date Analyzed: 5-12-05

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-059-29 05-059-29 DUP

Diesel Range: ND ND
PQL: 25 25

RPD: N/A

Surrogate Recovery
o-Terphenyl: 147% 147%

Flags: Y Y

Date of Report: May 19, 2005
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Date Extracted: 5-10-05
 Date Analyzed: 5-10-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-02
 Client ID: MW4-10-11.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00093
Chloromethane	ND		0.00093
Vinyl Chloride	ND		0.00093
Bromomethane	ND		0.00093
Chloroethane	ND		0.00093
Trichlorofluoromethane	ND		0.00093
1,1-Dichloroethene	ND		0.00093
Iodomethane	ND		0.0046
Methylene Chloride	0.0077	H	0.0046
(trans) 1,2-Dichloroethene	ND		0.00093
1,1-Dichloroethane	ND		0.00093
2,2-Dichloropropane	ND		0.00093
(cis) 1,2-Dichloroethene	0.0015		0.00093
Bromochloromethane	ND		0.00093
Chloroform	ND		0.00093
1,1,1-Trichloroethane	ND		0.00093
Carbon Tetrachloride	ND		0.00093
1,1-Dichloropropene	ND		0.00093
1,2-Dichloroethane	ND		0.00093
Trichloroethene	0.0019		0.00093
1,2-Dichloropropane	ND		0.00093
Dibromomethane	ND		0.00093
Bromodichloromethane	ND		0.00093
2-Chloroethyl Vinyl Ether	ND		0.0046
(cis) 1,3-Dichloropropene	ND		0.00093
(trans) 1,3-Dichloropropene	ND		0.00093

Date of Report: May 19, 2005
 Samples Submitted: May 9, 2005
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Lab ID: 05-059-02
 Client ID: MW4-10-11.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00093
Tetrachloroethene	0.16		0.00093
1,3-Dichloropropane	ND		0.00093
Dibromochloromethane	ND		0.00093
1,2-Dibromoethane	ND		0.00093
Chlorobenzene	ND		0.00093
1,1,1,2-Tetrachloroethane	ND		0.00093
Bromoform	ND		0.00093
Bromobenzene	ND		0.00093
1,1,2,2-Tetrachloroethane	ND		0.00093
1,2,3-Trichloropropane	ND		0.00093
2-Chlorotoluene	ND		0.00093
4-Chlorotoluene	ND		0.00093
1,3-Dichlorobenzene	ND		0.00093
1,4-Dichlorobenzene	ND		0.00093
1,2-Dichlorobenzene	ND		0.00093
1,2-Dibromo-3-chloropropane	ND		0.0046
1,2,4-Trichlorobenzene	ND		0.00093
Hexachlorobutadiene	ND		0.0046
1,2,3-Trichlorobenzene	ND		0.00093

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	84	71-126
Toluene, d8	90	73-130
4-Bromofluorobenzene	89	70-130

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Date Extracted: 5-10-05
 Date Analyzed: 5-10-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-09
 Client ID: MW4-45-45.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00095
Chloromethane	ND		0.00095
Vinyl Chloride	ND		0.00095
Bromomethane	ND		0.00095
Chloroethane	ND		0.00095
Trichlorofluoromethane	ND		0.00095
1,1-Dichloroethene	ND		0.00095
Iodomethane	ND		0.0048
Methylene Chloride	0.0061	H	0.0048
(trans) 1,2-Dichloroethene	ND		0.00095
1,1-Dichloroethane	ND		0.00095
2,2-Dichloropropane	ND		0.00095
(cis) 1,2-Dichloroethene	ND		0.00095
Bromochloromethane	ND		0.00095
Chloroform	ND		0.00095
1,1,1-Trichloroethane	ND		0.00095
Carbon Tetrachloride	ND		0.00095
1,1-Dichloropropene	ND		0.00095
1,2-Dichloroethane	ND		0.00095
Trichloroethene	ND		0.00095
1,2-Dichloropropane	ND		0.00095
Dibromomethane	ND		0.00095
Bromodichloromethane	ND		0.00095
2-Chloroethyl Vinyl Ether	ND		0.0048
(cis) 1,3-Dichloropropene	ND		0.00095
(trans) 1,3-Dichloropropene	ND		0.00095

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Lab ID: 05-059-09
 Client ID: MW4-45-45.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00095
Tetrachloroethene	0.11		0.00095
1,3-Dichloropropane	ND		0.00095
Dibromochloromethane	ND		0.00095
1,2-Dibromoethane	ND		0.00095
Chlorobenzene	ND		0.00095
1,1,1,2-Tetrachloroethane	ND		0.00095
Bromoform	ND		0.00095
Bromobenzene	ND		0.00095
1,1,2,2-Tetrachloroethane	ND		0.00095
1,2,3-Trichloropropane	ND		0.00095
2-Chlorotoluene	ND		0.00095
4-Chlorotoluene	ND		0.00095
1,3-Dichlorobenzene	ND		0.00095
1,4-Dichlorobenzene	ND		0.00095
1,2-Dichlorobenzene	ND		0.00095
1,2-Dibromo-3-chloropropane	ND		0.0048
1,2,4-Trichlorobenzene	ND		0.00095
Hexachlorobutadiene	ND		0.0048
1,2,3-Trichlorobenzene	ND		0.00095

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	81	71-126
Toluene, d8	79	73-130
4-Bromofluorobenzene	87	70-130

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Date Extracted: 5-10-05
 Date Analyzed: 5-10-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-12
 Client ID: MW5-5-6.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00084
Chloromethane	ND		0.00084
Vinyl Chloride	ND		0.00084
Bromomethane	ND		0.00084
Chloroethane	ND		0.00084
Trichlorofluoromethane	ND		0.00084
1,1-Dichloroethene	ND		0.00084
Iodomethane	ND		0.0042
Methylene Chloride	ND		0.0042
(trans) 1,2-Dichloroethene	ND		0.00084
1,1-Dichloroethane	ND		0.00084
2,2-Dichloropropane	ND		0.00084
(cis) 1,2-Dichloroethene	ND		0.00084
Bromochloromethane	ND		0.00084
Chloroform	ND		0.00084
1,1,1-Trichloroethane	ND		0.00084
Carbon Tetrachloride	ND		0.00084
1,1-Dichloropropene	ND		0.00084
1,2-Dichloroethane	ND		0.00084
Trichloroethene	ND		0.00084
1,2-Dichloropropane	ND		0.00084
Dibromomethane	ND		0.00084
Bromodichloromethane	ND		0.00084
2-Chloroethyl Vinyl Ether	ND		0.0042
(cis) 1,3-Dichloropropene	ND		0.00084
(trans) 1,3-Dichloropropene	ND		0.00084

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Lab ID: 05-059-12
 Client ID: MW5-5-6.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00084
Tetrachloroethene	1.0	E	0.00084
1,3-Dichloropropane	ND		0.00084
Dibromochloromethane	ND		0.00084
1,2-Dibromoethane	ND		0.00084
Chlorobenzene	ND		0.00084
1,1,1,2-Tetrachloroethane	ND		0.00084
Bromoform	ND		0.00084
Bromobenzene	ND		0.00084
1,1,2,2-Tetrachloroethane	ND		0.00084
1,2,3-Trichloropropane	ND		0.00084
2-Chlorotoluene	ND		0.00084
4-Chlorotoluene	ND		0.00084
1,3-Dichlorobenzene	ND		0.00084
1,4-Dichlorobenzene	ND		0.00084
1,2-Dichlorobenzene	ND		0.00084
1,2-Dibromo-3-chloropropane	ND		0.0042
1,2,4-Trichlorobenzene	ND		0.00084
Hexachlorobutadiene	ND		0.0042
1,2,3-Trichlorobenzene	ND		0.00084

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	84	71-126
Toluene, d8	90	73-130
4-Bromofluorobenzene	80	70-130

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Date Extracted: 5-11-05
 Date Analyzed: 5-11-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-13
 Client ID: MW5-10-11.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0010
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0010
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Iodomethane	ND		0.0051
Methylene Chloride	ND		0.0051
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0051
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

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Lab ID: 05-059-13
 Client ID: MW5-10-11.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	0.036		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0051
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0051
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	76	71-126
Toluene, d8	84	73-130
4-Bromofluorobenzene	87	70-130

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Date Extracted: 5-11-05
 Date Analyzed: 5-11-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-20
 Client ID: MW5-50-50.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00079
Chloromethane	ND		0.00079
Vinyl Chloride	ND		0.00079
Bromomethane	ND		0.00079
Chloroethane	ND		0.00079
Trichlorofluoromethane	ND		0.00079
1,1-Dichloroethene	ND		0.00079
Iodomethane	ND		0.0040
Methylene Chloride	0.0047	H	0.0040
(trans) 1,2-Dichloroethene	ND		0.00079
1,1-Dichloroethane	ND		0.00079
2,2-Dichloropropane	ND		0.00079
(cis) 1,2-Dichloroethene	ND		0.00079
Bromochloromethane	ND		0.00079
Chloroform	ND		0.00079
1,1,1-Trichloroethane	ND		0.00079
Carbon Tetrachloride	ND		0.00079
1,1-Dichloropropene	ND		0.00079
1,2-Dichloroethane	ND		0.00079
Trichloroethene	ND		0.00079
1,2-Dichloropropane	ND		0.00079
Dibromomethane	ND		0.00079
Bromodichloromethane	ND		0.00079
2-Chloroethyl Vinyl Ether	ND		0.0040
(cis) 1,3-Dichloropropene	ND		0.00079
(trans) 1,3-Dichloropropene	ND		0.00079

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Lab ID: 05-059-20
 Client ID: MW5-50-50.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00079
Tetrachloroethene	0.041		0.00079
1,3-Dichloropropane	ND		0.00079
Dibromochloromethane	ND		0.00079
1,2-Dibromoethane	ND		0.00079
Chlorobenzene	ND		0.00079
1,1,1,2-Tetrachloroethane	ND		0.00079
Bromoform	ND		0.00079
Bromobenzene	ND		0.00079
1,1,2,2-Tetrachloroethane	ND		0.00079
1,2,3-Trichloropropane	ND		0.00079
2-Chlorotoluene	ND		0.00079
4-Chlorotoluene	ND		0.00079
1,3-Dichlorobenzene	ND		0.00079
1,4-Dichlorobenzene	ND		0.00079
1,2-Dichlorobenzene	ND		0.00079
1,2-Dibromo-3-chloropropane	ND		0.0040
1,2,4-Trichlorobenzene	ND		0.00079
Hexachlorobutadiene	ND		0.0040
1,2,3-Trichlorobenzene	ND		0.00079

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	78	71-126
Toluene, d8	84	73-130
4-Bromofluorobenzene	87	70-130

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Date Extracted: 5-10-05
 Date Analyzed: 5-10-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-27
 Client ID: AS1-79-80

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00095
Chloromethane	ND		0.00095
Vinyl Chloride	ND		0.00095
Bromomethane	ND		0.00095
Chloroethane	ND		0.00095
Trichlorofluoromethane	ND		0.00095
1,1-Dichloroethene	ND		0.00095
Iodomethane	ND		0.0047
Methylene Chloride	0.0076	H	0.0047
(trans) 1,2-Dichloroethene	ND		0.00095
1,1-Dichloroethane	ND		0.00095
2,2-Dichloropropane	ND		0.00095
(cis) 1,2-Dichloroethene	ND		0.00095
Bromochloromethane	ND		0.00095
Chloroform	ND		0.00095
1,1,1-Trichloroethane	ND		0.00095
Carbon Tetrachloride	ND		0.00095
1,1-Dichloropropene	ND		0.00095
1,2-Dichloroethane	ND		0.00095
Trichloroethene	ND		0.00095
1,2-Dichloropropane	ND		0.00095
Dibromomethane	ND		0.00095
Bromodichloromethane	ND		0.00095
2-Chloroethyl Vinyl Ether	ND		0.0047
(cis) 1,3-Dichloropropene	ND		0.00095
(trans) 1,3-Dichloropropene	ND		0.00095

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Lab ID: 05-059-27
 Client ID: AS1-79-80

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00095
Tetrachloroethene	0.013		0.00095
1,3-Dichloropropane	ND		0.00095
Dibromochloromethane	ND		0.00095
1,2-Dibromoethane	ND		0.00095
Chlorobenzene	ND		0.00095
1,1,1,2-Tetrachloroethane	ND		0.00095
Bromoform	ND		0.00095
Bromobenzene	ND		0.00095
1,1,2,2-Tetrachloroethane	ND		0.00095
1,2,3-Trichloropropane	ND		0.00095
2-Chlorotoluene	ND		0.00095
4-Chlorotoluene	ND		0.00095
1,3-Dichlorobenzene	ND		0.00095
1,4-Dichlorobenzene	ND		0.00095
1,2-Dichlorobenzene	ND		0.00095
1,2-Dibromo-3-chloropropane	ND		0.0047
1,2,4-Trichlorobenzene	ND		0.00095
Hexachlorobutadiene	ND		0.0047
1,2,3-Trichlorobenzene	ND		0.00095

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	80	71-126
Toluene, d8	85	73-130
4-Bromofluorobenzene	96	70-130

Date of Report: May 19, 2005
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 Project: 603-001

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Date Extracted: 5-10&11-05
 Date Analyzed: 5-10&11-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-29
 Client ID: MW9-5-6.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00073
Chloromethane	ND		0.00073
Vinyl Chloride	ND		0.00073
Bromomethane	ND		0.00073
Chloroethane	ND		0.00073
Trichlorofluoromethane	ND		0.00073
1,1-Dichloroethene	ND		0.00073
Iodomethane	ND		0.0036
Methylene Chloride	0.0044	H	0.0036
(trans) 1,2-Dichloroethene	ND		0.00073
1,1-Dichloroethane	ND		0.00073
2,2-Dichloropropane	ND		0.00073
(cis) 1,2-Dichloroethene	ND		0.00073
Bromochloromethane	ND		0.00073
Chloroform	ND		0.00073
1,1,1-Trichloroethane	ND		0.00073
Carbon Tetrachloride	ND		0.00073
1,1-Dichloropropene	ND		0.00073
1,2-Dichloroethane	ND		0.00073
Trichloroethene	ND		0.00073
1,2-Dichloropropane	ND		0.00073
Dibromomethane	ND		0.00073
Bromodichloromethane	ND		0.00073
2-Chloroethyl Vinyl Ether	ND		0.0036
(cis) 1,3-Dichloropropene	ND		0.00073
(trans) 1,3-Dichloropropene	ND		0.00073

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Lab ID: 05-059-29
 Client ID: MW9-5-6.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00073
Tetrachloroethene	1.5		0.037
1,3-Dichloropropane	ND		0.00073
Dibromochloromethane	ND		0.00073
1,2-Dibromoethane	ND		0.00073
Chlorobenzene	ND		0.00073
1,1,1,2-Tetrachloroethane	ND		0.00073
Bromoform	ND		0.00073
Bromobenzene	ND		0.00073
1,1,2,2-Tetrachloroethane	ND		0.00073
1,2,3-Trichloropropane	ND		0.00073
2-Chlorotoluene	ND		0.00073
4-Chlorotoluene	ND		0.00073
1,3-Dichlorobenzene	ND		0.00073
1,4-Dichlorobenzene	ND		0.00073
1,2-Dichlorobenzene	ND		0.00073
1,2-Dibromo-3-chloropropane	ND		0.0036
1,2,4-Trichlorobenzene	ND		0.00073
Hexachlorobutadiene	ND		0.0036
1,2,3-Trichlorobenzene	ND		0.00073

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	77	71-126
Toluene, d8	84	73-130
4-Bromofluorobenzene	80	70-130

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Date Extracted: 5-10&11-05
 Date Analyzed: 5-10&11-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-30
 Client ID: MW9-10-11.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00069
Chloromethane	ND		0.00069
Vinyl Chloride	ND		0.00069
Bromomethane	ND		0.00069
Chloroethane	ND		0.00069
Trichlorofluoromethane	ND		0.00069
1,1-Dichloroethene	ND		0.00069
Iodomethane	ND		0.0035
Methylene Chloride	0.0040	H	0.0035
(trans) 1,2-Dichloroethene	ND		0.00069
1,1-Dichloroethane	ND		0.00069
2,2-Dichloropropane	ND		0.00069
(cis) 1,2-Dichloroethene	0.022		0.00069
Bromochloromethane	ND		0.00069
Chloroform	ND		0.00069
1,1,1-Trichloroethane	ND		0.00069
Carbon Tetrachloride	ND		0.00069
1,1-Dichloropropene	ND		0.00069
1,2-Dichloroethane	ND		0.00069
Trichloroethene	0.021		0.00069
1,2-Dichloropropane	ND		0.00069
Dibromomethane	ND		0.00069
Bromodichloromethane	ND		0.00069
2-Chloroethyl Vinyl Ether	ND		0.0035
(cis) 1,3-Dichloropropene	ND		0.00069
(trans) 1,3-Dichloropropene	ND		0.00069

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Lab ID: 05-059-30
 Client ID: MW9-10-11.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00069
Tetrachloroethene	3.8		0.22
1,3-Dichloropropane	ND		0.00069
Dibromochloromethane	ND		0.00069
1,2-Dibromoethane	ND		0.00069
Chlorobenzene	ND		0.00069
1,1,1,2-Tetrachloroethane	ND		0.00069
Bromoform	ND		0.00069
Bromobenzene	ND		0.00069
1,1,2,2-Tetrachloroethane	ND		0.00069
1,2,3-Trichloropropane	ND		0.00069
2-Chlorotoluene	ND		0.00069
4-Chlorotoluene	ND		0.00069
1,3-Dichlorobenzene	ND		0.00069
1,4-Dichlorobenzene	ND		0.00069
1,2-Dichlorobenzene	ND		0.00069
1,2-Dibromo-3-chloropropane	ND		0.0035
1,2,4-Trichlorobenzene	ND		0.00069
Hexachlorobutadiene	ND		0.0035
1,2,3-Trichlorobenzene	ND		0.00069

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	78	71-126
Toluene, d8	88	73-130
4-Bromofluorobenzene	90	70-130

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Date Extracted: 5-10&11-05
 Date Analyzed: 5-10&11-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-32
 Client ID: MW9-20-21.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00061
Chloromethane	ND		0.00061
Vinyl Chloride	ND		0.00061
Bromomethane	ND		0.00061
Chloroethane	ND		0.00061
Trichlorofluoromethane	ND		0.00061
1,1-Dichloroethene	ND		0.00061
Iodomethane	ND		0.0030
Methylene Chloride	0.0038	H	0.0030
(trans) 1,2-Dichloroethene	ND		0.00061
1,1-Dichloroethane	ND		0.00061
2,2-Dichloropropane	ND		0.00061
(cis) 1,2-Dichloroethene	0.0031		0.00061
Bromochloromethane	ND		0.00061
Chloroform	ND		0.00061
1,1,1-Trichloroethane	ND		0.00061
Carbon Tetrachloride	ND		0.00061
1,1-Dichloropropene	ND		0.00061
1,2-Dichloroethane	ND		0.00061
Trichloroethene	0.0024		0.00061
1,2-Dichloropropane	ND		0.00061
Dibromomethane	ND		0.00061
Bromodichloromethane	ND		0.00061
2-Chloroethyl Vinyl Ether	ND		0.0030
(cis) 1,3-Dichloropropene	ND		0.00061
(trans) 1,3-Dichloropropene	ND		0.00061

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Lab ID: 05-059-32
 Client ID: MW9-20-21.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00061
Tetrachloroethene	1.1		0.039
1,3-Dichloropropane	ND		0.00061
Dibromochloromethane	ND		0.00061
1,2-Dibromoethane	ND		0.00061
Chlorobenzene	ND		0.00061
1,1,1,2-Tetrachloroethane	ND		0.00061
Bromoform	ND		0.00061
Bromobenzene	ND		0.00061
1,1,2,2-Tetrachloroethane	ND		0.00061
1,2,3-Trichloropropane	ND		0.00061
2-Chlorotoluene	ND		0.00061
4-Chlorotoluene	ND		0.00061
1,3-Dichlorobenzene	ND		0.00061
1,4-Dichlorobenzene	ND		0.00061
1,2-Dichlorobenzene	ND		0.00061
1,2-Dibromo-3-chloropropane	ND		0.0030
1,2,4-Trichlorobenzene	ND		0.00061
Hexachlorobutadiene	ND		0.0030
1,2,3-Trichlorobenzene	ND		0.00061

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	84	71-126
Toluene, d8	86	73-130
4-Bromofluorobenzene	93	70-130

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Date Extracted: 5-10&11-05
 Date Analyzed: 5-10&11-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-37
 Client ID: MW9-45-45.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00081
Chloromethane	ND		0.00081
Vinyl Chloride	ND		0.00081
Bromomethane	ND		0.00081
Chloroethane	ND		0.00081
Trichlorofluoromethane	ND		0.00081
1,1-Dichloroethene	ND		0.00081
Iodomethane	ND		0.0040
Methylene Chloride	0.0044	H	0.0040
(trans) 1,2-Dichloroethene	ND		0.00081
1,1-Dichloroethane	ND		0.00081
2,2-Dichloropropane	ND		0.00081
(cis) 1,2-Dichloroethene	0.0047		0.00081
Bromochloromethane	ND		0.00081
Chloroform	ND		0.00081
1,1,1-Trichloroethane	ND		0.00081
Carbon Tetrachloride	ND		0.00081
1,1-Dichloropropene	ND		0.00081
1,2-Dichloroethane	ND		0.00081
Trichloroethene	0.0028		0.00081
1,2-Dichloropropane	ND		0.00081
Dibromomethane	ND		0.00081
Bromodichloromethane	ND		0.00081
2-Chloroethyl Vinyl Ether	ND		0.0040
(cis) 1,3-Dichloropropene	ND		0.00081
(trans) 1,3-Dichloropropene	ND		0.00081

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Lab ID: 05-059-37
 Client ID: MW9-45-45.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00081
Tetrachloroethene	0.83		0.037
1,3-Dichloropropane	ND		0.00081
Dibromochloromethane	ND		0.00081
1,2-Dibromoethane	ND		0.00081
Chlorobenzene	ND		0.00081
1,1,1,2-Tetrachloroethane	ND		0.00081
Bromoform	ND		0.00081
Bromobenzene	ND		0.00081
1,1,2,2-Tetrachloroethane	ND		0.00081
1,2,3-Trichloropropane	ND		0.00081
2-Chlorotoluene	ND		0.00081
4-Chlorotoluene	ND		0.00081
1,3-Dichlorobenzene	ND		0.00081
1,4-Dichlorobenzene	ND		0.00081
1,2-Dichlorobenzene	ND		0.00081
1,2-Dibromo-3-chloropropane	ND		0.0040
1,2,4-Trichlorobenzene	ND		0.00081
Hexachlorobutadiene	ND		0.0040
1,2,3-Trichlorobenzene	ND		0.00081

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	82	71-126
Toluene, d8	91	73-130
4-Bromofluorobenzene	96	70-130

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Date Extracted: 5-10-05
 Date Analyzed: 5-10-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-44
 Client ID: MW1D-70-70.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00081
Chloromethane	ND		0.00081
Vinyl Chloride	ND		0.00081
Bromomethane	ND		0.00081
Chloroethane	ND		0.00081
Trichlorofluoromethane	ND		0.00081
1,1-Dichloroethene	ND		0.00081
Iodomethane	ND		0.0040
Methylene Chloride	0.0063	H	0.0040
(trans) 1,2-Dichloroethene	ND		0.00081
1,1-Dichloroethane	ND		0.00081
2,2-Dichloropropane	ND		0.00081
(cis) 1,2-Dichloroethene	ND		0.00081
Bromochloromethane	ND		0.00081
Chloroform	ND		0.00081
1,1,1-Trichloroethane	ND		0.00081
Carbon Tetrachloride	ND		0.00081
1,1-Dichloropropene	ND		0.00081
1,2-Dichloroethane	ND		0.00081
Trichloroethene	ND		0.00081
1,2-Dichloropropane	ND		0.00081
Dibromomethane	ND		0.00081
Bromodichloromethane	ND		0.00081
2-Chloroethyl Vinyl Ether	ND		0.0040
(cis) 1,3-Dichloropropene	ND		0.00081
(trans) 1,3-Dichloropropene	ND		0.00081

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Lab ID: 05-059-44
 Client ID: MW1D-70-70.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00081
Tetrachloroethene	0.0031		0.00081
1,3-Dichloropropane	ND		0.00081
Dibromochloromethane	ND		0.00081
1,2-Dibromoethane	ND		0.00081
Chlorobenzene	ND		0.00081
1,1,1,2-Tetrachloroethane	ND		0.00081
Bromoform	ND		0.00081
Bromobenzene	ND		0.00081
1,1,2,2-Tetrachloroethane	ND		0.00081
1,2,3-Trichloropropane	ND		0.00081
2-Chlorotoluene	ND		0.00081
4-Chlorotoluene	ND		0.00081
1,3-Dichlorobenzene	ND		0.00081
1,4-Dichlorobenzene	ND		0.00081
1,2-Dichlorobenzene	ND		0.00081
1,2-Dibromo-3-chloropropane	ND		0.0040
1,2,4-Trichlorobenzene	ND		0.00081
Hexachlorobutadiene	ND		0.0040
1,2,3-Trichlorobenzene	ND		0.00081

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	80	71-126
Toluene, d8	83	73-130
4-Bromofluorobenzene	94	70-130

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Date Extracted: 5-10&11-05
 Date Analyzed: 5-10&11-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-059-47
 Client ID: B1-7.5-9

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00093
Chloromethane	ND		0.00093
Vinyl Chloride	ND		0.00093
Bromomethane	ND		0.00093
Chloroethane	ND		0.00093
Trichlorofluoromethane	ND		0.00093
1,1-Dichloroethene	ND		0.00093
Iodomethane	ND		0.0047
Methylene Chloride	0.0080	H	0.0047
(trans) 1,2-Dichloroethene	ND		0.00093
1,1-Dichloroethane	ND		0.00093
2,2-Dichloropropane	ND		0.00093
(cis) 1,2-Dichloroethene	0.012		0.00093
Bromochloromethane	ND		0.00093
Chloroform	ND		0.00093
1,1,1-Trichloroethane	ND		0.00093
Carbon Tetrachloride	ND		0.00093
1,1-Dichloropropene	ND		0.00093
1,2-Dichloroethane	ND		0.00093
Trichloroethene	0.0091		0.00093
1,2-Dichloropropane	ND		0.00093
Dibromomethane	ND		0.00093
Bromodichloromethane	ND		0.00093
2-Chloroethyl Vinyl Ether	ND		0.0047
(cis) 1,3-Dichloropropene	ND		0.00093
(trans) 1,3-Dichloropropene	ND		0.00093

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Lab ID: 05-059-47
 Client ID: B1-7.5-9

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00093
Tetrachloroethene	0.21		0.046
1,3-Dichloropropane	ND		0.00093
Dibromochloromethane	ND		0.00093
1,2-Dibromoethane	ND		0.00093
Chlorobenzene	ND		0.00093
1,1,1,2-Tetrachloroethane	ND		0.00093
Bromoform	ND		0.00093
Bromobenzene	ND		0.00093
1,1,2,2-Tetrachloroethane	ND		0.00093
1,2,3-Trichloropropane	ND		0.00093
2-Chlorotoluene	ND		0.00093
4-Chlorotoluene	ND		0.00093
1,3-Dichlorobenzene	ND		0.00093
1,4-Dichlorobenzene	ND		0.00093
1,2-Dichlorobenzene	ND		0.00093
1,2-Dibromo-3-chloropropane	ND		0.0047
1,2,4-Trichlorobenzene	ND		0.00093
Hexachlorobutadiene	ND		0.0047
1,2,3-Trichlorobenzene	ND		0.00093

Surrogate	Percent Recovery	Control Limits
Dibromochloromethane	78	71-126
Toluene, m-8	82	73-130
4-Bromofluorobenzene	93	70-130

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Date Extracted: 5-10-05
 Date Analyzed: 5-10-05

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: MB0510S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0010
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0010
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Iodomethane	ND		0.0050
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

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Lab ID: MB0510S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	83	71-126
Toluene, d8	75	73-130
4-Bromofluorobenzene	81	70-130

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Date Extracted: 5-11-05
 Date Analyzed: 5-11-05
 Matrix: Soil
 Units: mg/kg (ppm)
 Lab ID: MB0511S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0010
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0010
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Iodomethane	ND		0.0050
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

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Lab ID: MB0511S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	79	71-126
Toluene, d8	84	73-130
4-Bromofluorobenzene	84	70-130

Date of Report: May 19, 2005
 Samples Submitted: May 9, 2005
 Laboratory Reference: 0505-059
 Project: 603-001

**HALOGENATED VOLATILES by EPA 8260B
 SB/SBD QUALITY CONTROL**

Date Extracted: 5-10-05
 Date Analyzed: 5-10-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: SB0510S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0474	95	0.0528	106	70-130	
Benzene	0.0500	0.0510	102	0.0484	97	70-130	
Trichloroethene	0.0500	0.0519	104	0.0528	106	70-130	
Toluene	0.0500	0.0501	100	0.0496	99	70-130	
Chlorobenzene	0.0500	0.0502	100	0.0486	97	70-130	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	11	11	
Benzene	5	11	
Trichloroethene	2	13	
Toluene	1	11	
Chlorobenzene	3	12	

Date of Report: May 19, 2005
 Samples Submitted: May 9, 2005
 Laboratory Reference: 0505-059
 Project: 603-001

**HALOGENATED VOLATILES by EPA 8260B
 SB/SBD QUALITY CONTROL**

Date Extracted: 5-11-05

Date Analyzed: 5-11-05

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: SB0511S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0521	104	0.0549	110	70-130	
Benzene	0.0500	0.0413	83	0.0428	86	70-130	
Trichloroethene	0.0500	0.0505	101	0.0509	102	70-130	
Toluene	0.0500	0.0491	98	0.0447	89	70-130	
Chlorobenzene	0.0500	0.0513	103	0.0494	99	70-130	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	5	11	
Benzene	4	11	
Trichloroethene	1	13	
Toluene	9	11	
Chlorobenzene	4	12	

Date of Report: May 19, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059
Project: 603-001

% MOISTURE

Date Analyzed: 5-10&12-05

Client ID	Lab ID	% Moisture
MW4-10-11.5	05-059-02	7
MW4-45-45.5	05-059-09	5
MW5-5-6.5	05-059-12	4
MW5-10-11.5	05-059-13	4
MW5-50-50.5	05-059-20	7
AS1-79-80	05-059-27	23
MW9-5-6.5	05-059-29	14
MW9-10-11.5	05-059-30	18
MW9-20-21.5	05-059-32	5
MW9-45-45.5	05-059-37	6
MW1D-70-70.5	05-059-44	19
B1-5-6.5	05-059-46	20
B1-7.5-9	05-059-47	12
B1-10-11.5	05-059-48	6



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of co-eluting target compounds.
- G - Insufficient sample quantity for duplicate analysis.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- O - Hydrocarbons indicative of diesel fuel are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a silica gel cleanup procedure.
- Y - Sample extract treated with an acid/silica gel cleanup procedure.
- Z - The gasoline result is mainly attributed to a single peak (PCE).

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference

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Chain of Custody

Page 1 of 5Turnaround Request
(in working days)Laboratory Number: **05-059**

(Check One)

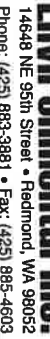
☐ Same Day ☐ 1 Day☐ 2 Day ☐ 3 Day☒ Standard (7 working days)☐ _____
(other)

Requested Analysis

Company: **FARALLON**
Project Number: **003-001**
Project Name: **FIND CITY HAND LAUNDRY**
Project Manager: **JEFF KASPAR**
Sampled by: **JOHN SCHMITT**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont	NWTP	NWTP	NWTP	Volatiles	Halogen	Semivol	PAHs	PCBs	Pestic	Herbicide	Total H	TCLP	HEM	VPH	EPH	HS	% Moisture	
1	MW4-5-6.5	5/7/05	0800	S	4																		
2	MW4-10-11.5		0804							X													X
3	MW4-15-16.5		0810																				
4	MW4-20-21.5		0816																				
5	MW4-25-26.5		0820																				
6	MW4-30-31.5		0825																				
7	MW4-35-35.5		0828																				
8	MW4-40-40.5		0834																				
9	MW4-45-45.5		0840		↓					X													X
10	MW4-50-50.5	↓	0845	↓	5																X		

	Signature	Company	Date	Time	Comments/Special Instructions:
Relinquished by	<i>John Schmitt</i>	FARALLON	5/8/05	2000	
Received by	<i>Jeff Kaspar</i> JK	FARALLON	5/9/05	8:35 AM	
Relinquished by	<i>Jeff Kaspar</i> #4	SPEERDY	5/9/05	1100	
Received by	<i>John Schmitt</i>	OSB	5/9/05	1100	
Relinquished by	<i>Jeff Kaspar</i> JK	FARALLON	5/9/05	1030	
Received by	<i>Jeff Kaspar</i> #4	SPEERDY	5/9/05	10.30	
Reviewed by/Date		Reviewed by/Date			Chromatograms with final report <input type="checkbox"/>



21

Company: <u>TERRELL</u>		(Check One)		Requested Analysis																				
Project Number: <u>6003-001</u>		<input type="checkbox"/> Same Day	<input type="checkbox"/> 1 Day																					
Project Name: <u>EMERALD CITY HAND LAUNDRY</u>		<input type="checkbox"/> 2 Day	<input type="checkbox"/> 3 Day																					
Project Manager: <u>JEFF KASPAR</u>		<input checked="" type="checkbox"/> Standard (7 working days)																						
Sampled by: <u>SCHMITT</u>		<input type="checkbox"/> (other)																						
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOD	% Moisture	
11	MW4-55-55.5	5/7/05	0850	S	4					X														X
12	MW5-5-10.5		1115							X														X
13	MW5-10-11.5		1120							X														X
14	MW5-15-16.5		1126																					
15	MW5-20-21.5		1130																					
16	MW5-25-26.5		1134																					
17	MW5-30-31.5		1140																					
18	MW5-35-35.5		1145																					
19	MW5-40-40.5		1148																					
20	MW5-50-50.5		1154							X														X
Relinquished by <u>Joe Scott</u>		Signature		Company		Date		Time		Comments/Special Instructions														
Received by <u>Jeff Kaspar</u>		Signature		Company		Date		Time																
Relinquished by <u>Jeff Kaspar</u>		Signature		Company		Date		Time																
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Relinquished by <u>Jeff Kaspar</u>		Signature		Company																				



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Chain of Custody

Page 2 of 5

Company: FARALLON
Project Number: 063-001
Project Name: FIND CITY LAND LAUNDRY
Project Manager: JEFF KASPIAN
Sampled by: J SCHMITT

Turnaround Request (in working days)	
(Check One)	
<input type="checkbox"/> Same Day	<input type="checkbox"/> 1 Day
<input type="checkbox"/> 2 Day	<input type="checkbox"/> 3 Day
<input checked="" type="checkbox"/> Standard (7 working days)	
<input type="checkbox"/> (other) _____	

Laboratory Number: **05-059**

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOD	% Moisture
21	MWS-55-55.5	5/7/05	1215	S	5																X		
22	MWS-59.5-60		1225		4																		
23	ASI-60-61		1445		5																	X	
24	ASI-65-65.5		1455		4																	X	
25	ASI-70-70.5		1520		1																	X	
26	ASI-75-75.5		1530		4																		
27	ASI-79-80	↓	1545		4					X													X
28	MW9-2.5-4	5/8/05	0840		4																		
29	MW9-5-6.5	↓	0844		4			X		X													X
30	MW9-10-11.5	↓	0848	↓	4			X		X													↓

Signature	Company	Date	Time	Comments/Special Instructions:
Relinquished by: <u>Joe Schmitt</u>	<u>FARALLON</u>	<u>5/8/05</u>	<u>20:00</u>	* Composite soil from these intervals for S.O.D. Test. Looking for heavy oil used to fuel boiler from old UST.
Received by: <u>M/Ly JLC</u>	<u>FARALLON</u>	<u>5/9/05</u>	<u>8:35 pm</u>	
Relinquished by: <u>M/Ly JLC</u>	<u>FARALLON</u>	<u>5/9/05</u>	<u>10:30</u>	
Received by: <u>Art #4</u>	<u>SPEEDY</u>	<u>5/9/05</u>	<u>10:30</u>	
Relinquished by: <u>Art #4</u>	<u>u</u>	<u>5/9/05</u>	<u>11:00</u>	
Received by: <u>M/Ly</u>	<u>OSE</u>	<u>5/9/05</u>	<u>11:00</u>	
Reviewed by/Date	Reviewed by/Date	Chromatograms with final report <input type="checkbox"/>		



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Chain of Custody

Page 4 of 5

Company: <u>FARAWAY</u> Project Number: <u>1003-001</u> Project Name: <u>FINN CITY HAND LAUNDRY</u> Project Manager: <u>JEFF KASPAR</u> Sampled by: <u>J SCHMITT</u>						Turnaround Request (in working days)		Laboratory Number: 05-059																
						(Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Standard (7 working days) <input type="checkbox"/> _____ (other)		Requested Analysis																
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HClD	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	ESA	% Moisture	
31	MW9-15-16.5	5/8/05	0855	S	4																			
32	MW9-20-21.5		0906		4					X														X
33	MW9-25-26.5		0910		4																			
34	MW9-30-31.5		0916		3																			
35	MW9-35-35.5		0920		4																			
36	MW9-40-40.5		0926																					
37	MW9-45-45.5		0930							X														X
38	MW9-50-50.5		0935																					
39	MW9-55-55.5		0946																					
40	MW1D-50-50.5		1250																					
Signature		Company		Date		Time		Comments/Special Instructions:																
Relinquished by		FARAWAY		5/8/05		20:00																		
Received by		Finn		5/9/05		8:35AM																		
Relinquished by		Finn		5/9/05		10:30																		
Received by		SPEEDY		5/9/05		10:30																		
Relinquished by		u u		5/9/05		11:00																		
Received by																								
Reviewed by/Date				Reviewed by/Date				Chromatograms with final report <input type="checkbox"/>																

Chain of Custody

Company: FARALLON
Project Number: 603-001
Project Name: FOR CITY LAND LAUNDRY
Project Manager: JEFF KASPAR
Sampled by: S SCHMITT

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

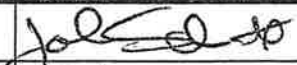





☒ Standard (7 working days)

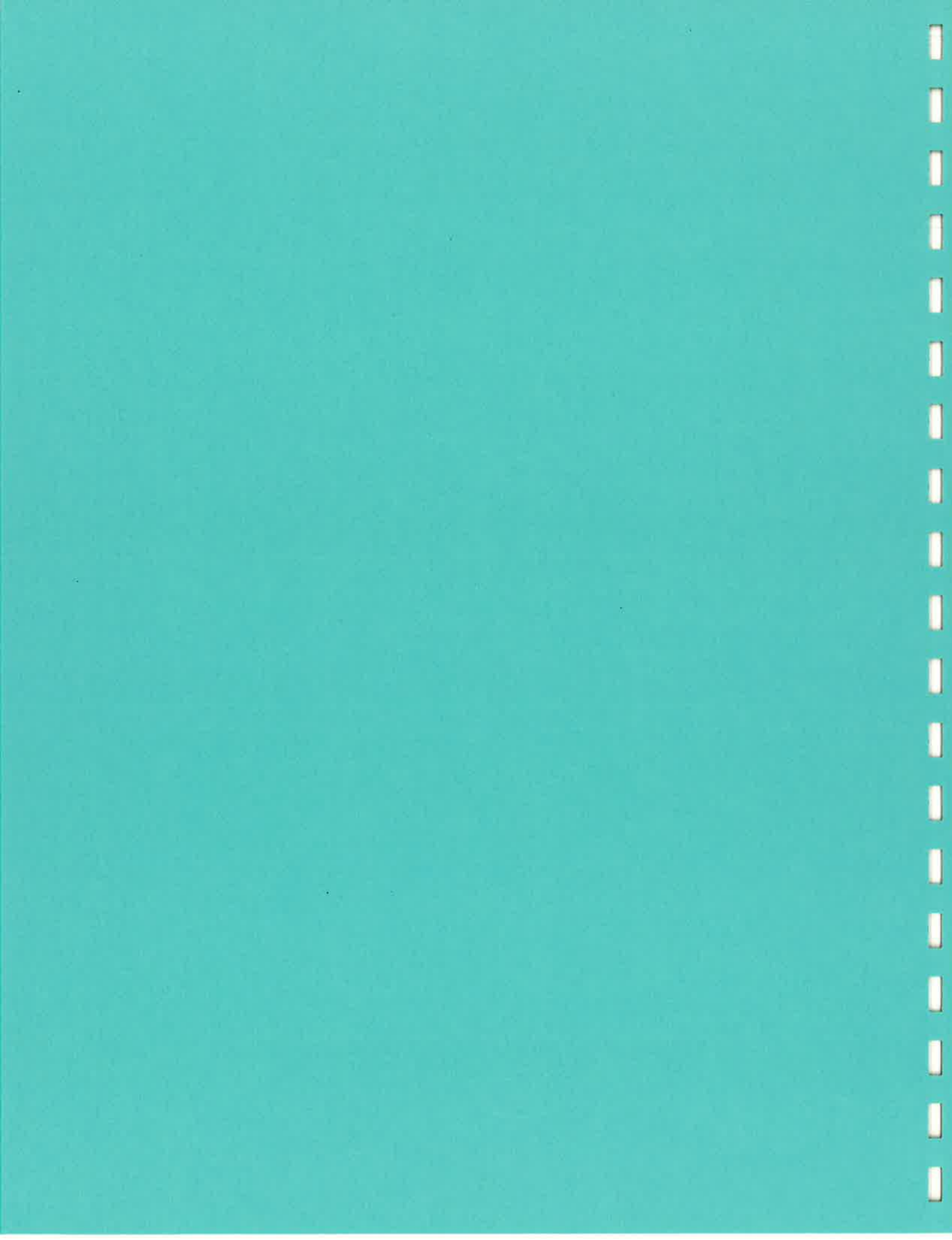
☐ _____ (other)

Laboratory Number: 05-059

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOA	% Moisture
41	MWID-55-55.5	5/4/05	1254	S	4																		
42	MWID-60-60.5		1300																				
43	MWID-65-65.5		1305																				
44	MWID-70-70.5		1310		↓					X													X
45	BI-2.5-4		1535		5																		
46	BI-5-6.5		1538		↓		X ²	X ²															X
47	BI-7.5-9		1540		↓		X ²	X ²															↓
48	BI-10-11.5	↓	1545	↓	↓		X ²	X ²															↓

Signature	Company	Date	Time	Comments/Special Instructions:
Relinquished by 	FARALLON	5/8/05	20:00	2 - Looking for release of gasoline and BTEX / DRO (diesel)
Received by  J. L.	FARALLON	5/9/05	8:55pm	
Relinquished by  J. L.	FARALLON	5/9/05	10:30	
Received by  Act #4	SPEEDY	5/9/05	10:30	
Relinquished by  Act #4	" "	5/9/05	11:00	
Received by  M. Ann	ORC	5/9/05	11:00	
Reviewed by/Date	Reviewed by/Date	Chromatograms with final report <input type="checkbox"/>		





June 10, 2005

Jeff Kaspar
Farallon Consulting, LLC
320 3rd Avenue NE, Suite 200
Issaquah, WA 98027

Re: Analytical Data for Project 603-001
Laboratory Reference No. 0505-083

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 11, 2005.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: June 10, 2005
Samples Submitted: May 11, 2005
Laborator / Reference: 0505-083
Project: 613-001

Case Narrative

Samples were collected on May 9, 2005 and received by the laboratory on May 11, 2005. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260B Analysis

Per EPA Method 5035A, samples were received by the laboratory in preweighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: June 10, 2005
Samples Submitted: May 11, 2005
Laboratory Reference: 0505-083
Project: 603-001

NWTPH-HCID

Date Extracted: 5-11-05
Date Analyzed: 5-11-05

Matrix: Soil
Units: mg/kg (ppm)

Client ID: MW8-10-11.5
Lab ID: 05-083-02

Gasoline: ND
PQL: 26

Diesel Fuel: ND
PQL: 64

Lube Oil: ND
PQL: 130

Surrogate Recovery:
o-Terphenyl 119%

Flags: Y

Date of Report: June 10, 2005
Samples Submitted: May 11, 2005
Laboratory Reference: 0505-083
Project: 613-001

**NWTPH-HCID
METHOD BLANK QUALITY CONTROL**

Date Extracted: 5-11-05
Date Analyzed: 5-11-05

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0511S1

Gasoline: ND
PQL: 20

Diesel Fuel: ND
PQL: 50

Lube Oil: ND
PQL: 100

Surrogate Recovery:
o-Terphenyl 134%

Flags Y

Date of Report: June 10, 2005
 Samples Submitted: May 11, 2005
 Laboratory Reference: 0505-083
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 1 of 2

Date Extracted: 5-17-05
 Date Analyzed: 5-17-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-083-02
 Client ID: MW8-10-11.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00097
Chloromethane	ND		0.00097
Vinyl Chloride	ND		0.00097
Bromomethane	ND		0.00097
Chloroethane	ND		0.00097
Trichlorofluoromethane	ND		0.00097
1,1-Dichloroethene	ND		0.00097
Iodomethane	ND		0.0048
Methylene Chloride	0.014	H	0.0048
(trans) 1,2-Dichloroethene	ND		0.00097
1,1-Dichloroethane	ND		0.00097
2,2-Dichloropropane	ND		0.00097
(cis) 1,2-Dichloroethene	ND		0.00097
Bromochloromethane	ND		0.00097
Chloroform	ND		0.00097
1,1,1-Trichloroethane	ND		0.00097
Carbon Tetrachloride	ND		0.00097
1,1-Dichloropropene	ND		0.00097
1,2-Dichloroethane	ND		0.00097
Trichloroethene	ND		0.00097
1,2-Dichloropropane	ND		0.00097
Dibromomethane	ND		0.00097
Bromodichloromethane	ND		0.00097
2-Chloroethyl Vinyl Ether	ND		0.0048
(cis) 1,3-Dichloropropene	ND		0.00097
(trans) 1,3-Dichloropropene	ND		0.00097

Date of Report: June 10, 2005
 Samples Submitted: May 11, 2005
 Laborator / Reference: 0505-083
 Project: 613-001

HALOGENATED VOLATILES by EPA 8260B
 page 2 of 2

Lab ID: 05-083-02
 Client ID: MW8-10-11.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00097
Tetrachloroethene	0.056		0.00097
1,3-Dichloropropane	ND		0.00097
Dibromochloromethane	ND		0.00097
1,2-Dibromoethane	ND		0.00097
Chlorobenzene	ND		0.00097
1,1,1,2-Tetrachloroethane	ND		0.00097
Bromoforn	ND		0.00097
Bromobenzene	ND		0.00097
1,1,2,2-Tetrachloroethane	ND		0.00097
1,2,3-Trichloropropane	ND		0.00097
2-Chlorotoluene	ND		0.00097
4-Chlorotoluene	ND		0.00097
1,3-Dichlorobenzene	ND		0.00097
1,4-Dichlorobenzene	ND		0.00097
1,2-Dichlorobenzene	ND		0.00097
1,2-Dibromo-3-chloropropane	ND		0.0048
1,2,4-Trichlorobenzene	ND		0.00097
Hexachlorobutadiene	ND		0.0048
1,2,3-Trichlorobenzene	ND		0.00097

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	82	71-126
Toluene, d8	87	73-130
4-Bromofluorobenzene	92	70-130

Date of Report: June 10, 2005
 Samples Submitted: May 11, 2005
 Laboratory Reference: 0505-083
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 1 of 2

Date Extracted: 5-17-05
 Date Analyzed: 5-17-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 05-083-05
 Client ID: MW8-25-26.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00086
Chloromethane	ND		0.00086
Vinyl Chloride	ND		0.00086
Bromomethane	ND		0.00086
Chloroethane	ND		0.00086
Trichlorofluoromethane	ND		0.00086
1,1-Dichloroethene	ND		0.00086
Iodomethane	ND		0.0043
Methylene Chloride	0.0085	H	0.0043
(trans) 1,2-Dichloroethene	ND		0.00086
1,1-Dichloroethane	ND		0.00086
2,2-Dichloropropane	ND		0.00086
(cis) 1,2-Dichloroethene	0.0040		0.00086
Bromochloromethane	ND		0.00086
Chloroform	ND		0.00086
1,1,1-Trichloroethane	ND		0.00086
Carbon Tetrachloride	ND		0.00086
1,1-Dichloropropene	ND		0.00086
1,2-Dichloroethane	ND		0.00086
Trichloroethene	0.0022		0.00086
1,2-Dichloropropane	ND		0.00086
Dibromomethane	ND		0.00086
Bromodichloromethane	ND		0.00086
2-Chloroethyl Vinyl Ether	ND		0.0043
(cis) 1,3-Dichloropropene	ND		0.00086
(trans) 1,3-Dichloropropene	ND		0.00086

Date of Report: June 10, 2005
 Samples Submitted: May 11, 2005
 Laboratory Reference: 0505-083
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 2 of 2

Lab ID: 05-083-05
 Client ID: MW8-25-26.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00086
Tetrachloroethene	4.0		0.041
1,3-Dichloropropane	ND		0.00086
Dibromochloromethane	ND		0.00086
1,2-Dibromoethane	ND		0.00086
Chlorobenzene	ND		0.00086
1,1,1,2-Tetrachloroethane	ND		0.00086
Bromofluoromethane	ND		0.00086
Bromobenzene	ND		0.00086
1,1,2,2-Tetrachloroethane	ND		0.00086
1,2,3-Trichloropropane	ND		0.00086
2-Chlorotoluene	ND		0.00086
4-Chlorotoluene	ND		0.00086
1,3-Dichlorobenzene	ND		0.00086
1,4-Dichlorobenzene	ND		0.00086
1,2-Dichlorobenzene	ND		0.00086
1,2-Dibromo-3-chloropropane	ND		0.0043
1,2,4-Trichlorobenzene	ND		0.00086
Hexachlorobutadiene	ND		0.0043
1,2,3-Trichlorobenzene	ND		0.00086

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	83	71-126
Toluene, d8	88	73-130
4-Bromofluorobenzene	93	70-130

Date of Report: June 10, 2005
 Samples submitted: May 11, 2005
 Laboratory Reference: 0505-083
 Project: 613-001

HALOGENATED VOLATILES by EPA 8260B
 page 1 of 2

Date Extracted: 5-17-05
 Date Analyzed: 5-17-05
 Matrix: Soil
 Units: mg/kg (ppm)
 Lab ID: 05-083-09
 Client ID: MW8-45-45.5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00093
Chloromethane	ND		0.00093
Vinyl Chloride	ND		0.00093
Bromomethane	ND		0.00093
Chloroethane	ND		0.00093
Trichlorofluoromethane	ND		0.00093
1,1-Dichloroethene	ND		0.00093
Iodomethane	ND		0.0047
Methylene Chloride	ND		0.0047
(trans) 1,2-Dichloroethene	ND		0.00093
1,1-Dichloroethane	ND		0.00093
2,2-Dichloropropane	ND		0.00093
(cis) 1,2-Dichloroethene	0.0045		0.00093
Bromochloromethane	ND		0.00093
Chloroform	ND		0.00093
1,1,1-Trichloroethane	ND		0.00093
Carbon Tetrachloride	ND		0.00093
1,1-Dichloropropene	ND		0.00093
1,2-Dichloroethane	ND		0.00093
Trichloroethene	0.0023		0.00093
1,2-Dichloropropane	ND		0.00093
Dibromomethane	ND		0.00093
Bromodichloromethane	ND		0.00093
2-Chloroethyl Vinyl Ether	ND		0.0047
(cis) 1,3-Dichloropropene	ND		0.00093
(trans) 1,3-Dichloropropene	ND		0.00093

Date of Report: June 10, 2005
 Samples Submitted: May 11, 2005
 Laborator / Reference: 0505-083
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 2 of 2

Lab ID: 05-083-09
 Client ID: MW8-45-45.5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00093
Tetrachloroethene	0.42		0.053
1,3-Dichloropropane	ND		0.00093
Dibromochloromethane	ND		0.00093
1,2-Dibromochloroethane	ND		0.00093
Chlorobenzene	ND		0.00093
1,1,1,2-Tetrachloroethane	ND		0.00093
Bromofluoromethane	ND		0.00093
Bromobenzene	ND		0.00093
1,1,2,2-Tetrachloroethane	ND		0.00093
1,2,3-Trichloropropane	ND		0.00093
2-Chlorotoluene	ND		0.00093
4-Chlorotoluene	ND		0.00093
1,3-Dichlorobenzene	ND		0.00093
1,4-Dichlorobenzene	ND		0.00093
1,2-Dichlorobenzene	ND		0.00093
1,2-Dibromo-3-chloropropane	ND		0.0047
1,2,4-Trichlorobenzene	ND		0.00093
Hexachlorobutadiene	ND		0.0047
1,2,3-Trichlorobenzene	ND		0.00093

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	71-126
Toluene, d8	88	73-130
4-Bromofluorobenzene	91	70-130

Date of Report: June 10, 2005
 Samples Submitted: May 11, 2005
 Laboratory Reference: 0505-083
 Project: 603-001

**HALOGENATED VOLATILES by EPA 8260B
 METHOD BLANK QUALITY CONTROL**

page 1 of 2

Date Extracted: 5-17-05
 Date Analyzed: 5-17-05
 Matrix: Soil
 Units: mg/kg (ppm)
 Lab ID: MB0517S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0010
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0010
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
Iodomethane	ND		0.0050
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Date of Report: June 10, 2005
 Samples Submitted: May 11, 2005
 Laboratory Reference: 0505-083
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
 page 2 of 2

Lab ID: MB0517S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromochloroethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
1,2,3-Trichlorobenzene	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	86	71-126
Toluene, d8	88	73-130
4-Bromofluorobenzene	92	70-130

Date of Report: June 10, 2005
 Samples submitted: May 11, 2005
 Laboratory / Reference: 0505-083
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B SB/SBD QUALITY CONTROL

Date Extracted: 5-17-05
 Date Analyzed: 5-17-05

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: SB0517S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0518	104	0.0533	107	70-130	
Benzene	0.0500	0.0552	110	0.0546	109	70-130	
Trichloroethene	0.0500	0.0563	113	0.0550	110	70-130	
Toluene	0.0500	0.0570	114	0.0554	111	70-130	
Chlorobenzene	0.0500	0.0574	115	0.0569	114	70-130	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	3	11	
Benzene	1	11	
Trichloroethene	2	13	
Toluene	3	11	
Chlorobenzene	1	12	

Date of Report: June 10, 2005
Samples Submitted: May 11, 2005
Laboratory Reference: 0505-083
Project: 603-001

% MOISTURE

Date Analyzed: 5-12-05

Client ID	Lab ID	% Moisture
MW8-10-1'.5	05-083-02	22
MW8-25-26.5	05-083-05	5
MW8-45-5.5	05-083-09	8



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- G - Insufficient sample quantity for duplicate analysis.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- O - Hydrocarbons indicative of diesel fuel are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a silica gel cleanup procedure.
- Y - Sample extract treated with an acid/silica gel cleanup procedure.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



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907.563.9200 fax 907.563.9210

06 June 2005

David Baumeister
OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052
RE: N/A

Enclosed are the results of analyses for samples received by the laboratory on 05/11/05 13:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cherie Howland For Sandra Yakamavich
Project Manager



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
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907.563.9200 fax 907.563.9210

OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW8-55-55.5	B5E0306-01	Soil	05/09/05 14:40	05/11/05 13:15

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Cherie Howland For Sandra Yakamavich, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 4



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907.563.9200 fax 907.563.9210

OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:02

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW8-55-55.5 (B5E0306-01) Soil Sampled: 05/09/05 14:40 Received: 05/11/05 13:15									
Dry Weight	90.9	1.00	%	I	5E20050	05/20/05	05/23/05	BSOPSPL003R08	
Fractional Organic Carbon	ND	0.00110	g/g dry	"	5F06058	05/19/05	06/06/05	EPA 9060 Mod	

North Creek Analytical - Bothell

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Cherie Howland For Sandra Yakamavich, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

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907.563.9200 fax 907.563.9210

OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:02

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 5E20050: Prepared 05/20/05 Using Dry Weight									
Blank (5E20050-BLK1)									
Dry Weight	100	1.00	%						
Batch 5F06058: Prepared 06/03/05 Using General Preparation									
Blank (5F06058-BLK1)									
Fractional Organic Carbon	ND	0.00110	g/g						
LCS (5F06058-BS1)									
Fractional Organic Carbon	0.0317	0.00110	g/g	0.0299		106	80-120		
LCS Dup (5F06058-BSD1)									
Fractional Organic Carbon	0.0306	0.00110	g/g	0.0299		102	80-120	3.53	20
Duplicate (5F06058-DUP1)									
Source: B5E0310-02									
Fractional Organic Carbon	ND	0.00110	g/g dry		ND			NA	25

North Creek Analytical - Bothell

Cherie Howland For Sandra Yakamavich, Project Manager

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Environmental Laboratory Network

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OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:02

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

North Creek Analytical - Bothell

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Cherie Howland For Sandra Yakamavich, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

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Page 1 of 1



Laboratory Reference #: 05-083

Project Manager: David Baumeister

Project Number: 603-CC(

Project Name: _____

Contact Person: _____

[illegible]

Chain of Custody

[illegible]



June 10, 2005

Jeff Kaspar
Farallon Consulting, LLC
320 3rd Avenue NE, Suite 200
Issaquah, WA 98027



Re: Analytical Data for Project 603-001
Laboratory Reference No. 0505-059C

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 9, 2005.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures



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907.563.9200 fax 907.563.9210

06 June 2005

David Baumeister
OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052
RE: N/A

Enclosed are the results of analyses for samples received by the laboratory on 05/11/05 13:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cherie Howland For Sandra Yakamavich
Project Manager



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907.563.9200 fax 907.563.9210

OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW4-50-50.5	B5E0310-01	Soil	05/07/05 08:45	05/11/05 13:15
MW5-55-55.5	B5E0310-02	Soil	05/07/05 12:15	05/11/05 13:15

North Creek Analytical - Bothell

Cherie Howland For Sandra Yakamavich, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Environmental Laboratory Network

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541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:04

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW4-50-50.5 (B5E0310-01) Soil Sampled: 05/07/05 08:45 Received: 05/11/05 13:15									
Dry Weight	92.8	1.00	%	1	5E20050	05/20/05	05/23/05	BSOPSPL003R08	
Fractional Organic Carbon	ND	0.00110	g/g dry	"	5F06058	05/19/05	06/06/05	EPA 9060 Mod	
MW5-55-55.5 (B5E0310-02) Soil Sampled: 05/07/05 12:15 Received: 05/11/05 13:15									
Dry Weight	95.0	1.00	%	1	5E20050	05/20/05	05/23/05	BSOPSPL003R08	
Fractional Organic Carbon	ND	0.00110	g/g dry	"	5F06058	05/19/05	06/06/05	EPA 9060 Mod	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Cherie Howland For Sandra Yakamavich, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 2 of 4



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:04

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 5E20050: Prepared 05/20/05 Using Dry Weight									
Blank (5E20050-BLK1)									
Dry Weight	100	1.00	%						
Batch 5F06058: Prepared 06/03/05 Using General Preparation									
Blank (5F06058-BLK1)									
Fractional Organic Carbon	ND	0.00110	g/g						
LCS (5F06058-BS1)									
Fractional Organic Carbon	0.0317	0.00110	g/g	0.0299		106	80-120		
LCS Dup (5F06058-BSD1)									
Fractional Organic Carbon	0.0306	0.00110	g/g	0.0299		102	80-120	3.53	20
Duplicate (5F06058-DUP1)									
Fractional Organic Carbon	ND	0.00110	g/g dry		ND			NA	25

Source: B5E0310-02

North Creek Analytical - Bothell

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Cherie Howland For Sandra Yakamavich, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 3 of 4



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
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541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

OnSite Environmental Inc.
14648 NE 95th Street
Redmond, WA/USA 98052

Project: N/A
Project Number: 603-001
Project Manager: David Baumeister

Reported:
06/06/05 16:04

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

North Creek Analytical - Bothell

Cherie Howland For Sandra Yakamavich, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 4



Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

(Check One)

Laboratory Number: 05-059

Requested Analysis

1 Day

☐ 3 Day

☒ Standard (7 working days)

(other)

John Summitt

Sample Identification

Date Sampled	Time Sampled	Matrix	Conc.

	% Moisture
--	------------

5715	0800	5	4
------	------	---	---

1000

08/10

08/6

0820

0825

					0828	
--	--	--	--	--	------	--

0834					
------	--	--	--	--	--

0840				↗
------	--	--	--	---

5	↑	0845	↓
---	---	------	---

Comments/Special Instructions

218

Thick	Parallel
-------	----------

Sparsity

285

Farlla	
--------	--

SPED-1

Reviewed by/Date

Chromatograms with final report ☐

Page 2 of 5

Environmental Inc. 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • Fax: (425) 885-4603						Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Standard (7 working days) <input type="checkbox"/> _____ (other)		Laboratory Number: 05-059																										
Company: <u>FARALLON</u> Project Number: <u>603-001</u> Project Name: <u>Fire City HAND LAUNDRY</u> Project Manager: <u>JEFF KASPAR</u> Sampled by: <u>J SCHMITT</u>																																		
Lab ID						Sample Identification						Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (6)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOD	% Moisture	
11	MW4-55-55.5					5/7/05	0850	S	4																									
12	MW5-5-6.5						1115							X																				X
13	MW5-10-11.5						1120							X																				↓
14	MW5-15-16.5						1126																											
15	MW5-20-21.5						1130																											
16	MW5-25-26.5						1134																											
17	MW5-30-31.5						1140																											
18	MW5-35-35.5						1145																											
19	MW5-40-40.5						1148																											
20	MW5-50-50.5						1154							X																				X
Signature						Company						Date		Time		Comments/Special Instructions:																		
Relinquished by						<u>Jeff Kaspar</u>						5/8/05		20:00																				
Received by						<u>FWallan</u>						5/9/05		8:55 AM																				
Relinquished by						<u>SPREEDY</u>						5/9/05		11:00																				
Received by						<u>OSB</u>						5/9/05		11:00																				
Relinquished by						<u>FWallan</u>						5/9/05		10:30																				
Received by						<u>SPREEDY</u>						5/9/05		10:30																				
Reviewed by/Date						Reviewed by/Date						Chromatograms with final report <input type="checkbox"/>																						



OnSite Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Page 3 of 5

Company: FARALLON
Project Number: 063-001
Project Name: Final City Land Laundry
Project Manager: JEFF KASPER
Sampled by: J Schmitt

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
☐ (other) _____

Laboratory Number: 05-059

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOD	% Moisture
21	MWS-55-55.5	5/7/05	1215	S	5																X		
22	MWS-59.5-60		1225		4																		
23	ASI-60-61		1445		5																	X	
24	ASI-65-65.5		1455		4																	X	
25	ASI-70-70.5		1520		1																	X	
26	ASI-75-75.5		1530		4																		
27	ASI-79-80		1545		4					X													X
28	MW9-2.5-4	5/8/05	0840		4																		
29	MW9-5-6.5		0844		4			X	X														X
30	MW9-10-11.5		0848		4			X	X														

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by Joe Schmitt	FARALLON	5/8/05	20.00	* Composite soil from these intervals for S.O.D. Test. Looking for heavy oil used to fuel boiler from old UST.
Received by Mike JLC	FARALLON	5/8/05	8:55 pm	
Relinquished by Mike JLC	FARALLON	5/9/05	10:30	
Received by Oct #4	SPEEDY	5/9/05	12:30	
Relinquished by Oct #4	"	5/9/05	11:00	
Received by Mike	OBE	5/9/05	1100	
Reviewed by/Date	Reviewed by/Date	Chromatograms with final report <input type="checkbox"/>		

Chain of Custody

Company: FARALLON
Project Number: 603-001
Project Name: Finn City Hand Laundry
Project Manager: JEFF KASPAR
Sampled by: J Schmitt

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
☐ _____ (other)

Laboratory Number: **05-059**

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOA	% Moisture
31	MW9-15-16.5	5/8/05	0855	S	4																		
32	MW9-20-21.5		0906		4					X													X
33	MW9-25-26.5		0910		4																		
34	MW9-30-31.5		0916		3																		
35	MW9-35-35.5		0920		4																		
36	MW9-40-40.5		0926																				
37	MW9-45-45.5		0930							X													X
38	MW9-50-50.5		0935																				
39	MW9-55-55.5		0946																				
40	MW1D-50-50.5		1250																				

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by <u>J Schmitt</u>	<u>FARALLON</u>	<u>5/8/05</u>	<u>20:00</u>	
Received by <u>[Signature]</u>	<u>Farallon</u>	<u>5/8/05</u>	<u>8:35am</u>	
Relinquished by <u>[Signature]</u>	<u>Farallon</u>	<u>5/9/05</u>	<u>10:30</u>	
Received by <u>But #4</u>	<u>SPEEDY</u>	<u>5/9/05</u>	<u>10:30</u>	
Relinquished by <u>But #4</u>	<u>" "</u>	<u>5/9/05</u>	<u>11:00</u>	
Received by				
Reviewed by/Date	Reviewed by/Date	Chromatograms with final report <input type="checkbox"/>		

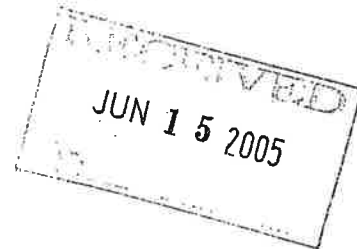




**OnSite
Environmental Inc.**

Analytical Testing and Mobile Laboratory Services

June 10, 2005



Jeff Kaspar
Farallon Consulting, LLC
320 3rd Avenue NE, Suite 200
Issaquah, WA 98027

Re: Analytical Data for Project 603-001
Laboratory Reference No. 0506-033

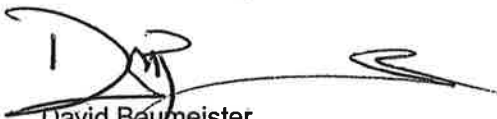
Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on June 2, 2005.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

Date of Report: June 10, 2005
Samples Submitted: June 2, 2005
Laboratory Reference: 0506-033
Project: 603-001

Case Narrative

Samples were collected on May 27, 2005 and received by the laboratory on June 2, 2005. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 6-7-05
 Date Analyzed: 6-7-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-033-01
 Client ID: DEV-1-052705

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		2.0
Chloromethane	ND		2.0
Vinyl Chloride	ND		2.0
Bromomethane	ND		2.0
Chloroethane	ND		2.0
Trichlorofluoromethane	ND		2.0
1,1-Dichloroethene	ND		2.0
Iodomethane	ND		10
Methylene Chloride	ND		10
(trans) 1,2-Dichloroethene	ND		2.0
1,1-Dichloroethane	ND		2.0
2,2-Dichloropropane	ND		2.0
(cis) 1,2-Dichloroethene	ND		2.0
Bromochloromethane	ND		2.0
Chloroform	ND		2.0
1,1,1-Trichloroethane	ND		2.0
Carbon Tetrachloride	ND		2.0
1,1-Dichloropropene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
1,2-Dichloropropane	ND		2.0
Dibromomethane	ND		2.0
Bromodichloromethane	ND		2.0
2-Chloroethyl Vinyl Ether	ND		10
(cis) 1,3-Dichloropropene	ND		2.0
(trans) 1,3-Dichloropropene	ND		2.0

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 613-001

HALOGENATED VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 06-033-01
 Client ID: DEV-1-052705

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		2.0
Tetrachloroethene	450		2.0
1,3-Dichloropropane	ND		2.0
Dibromochloromethane	ND		2.0
1,2-Dibromoethane	ND		2.0
Chlorobenzene	ND		2.0
1,1,1,2-Tetrachloroethane	ND		2.0
Bromoforane	ND		10
Bromobenzene	ND		2.0
1,1,2,2-Tetrachloroethane	ND		2.0
1,2,3-Trichloropropane	ND		2.0
2-Chlorotoluene	ND		2.0
4-Chlorotoluene	ND		2.0
1,3-Dichlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
1,2-Dichlorobenzene	ND		2.0
1,2-Dibromo-3-chloropropane	ND		10
1,2,4-Trichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0
1,2,3-Trichlorobenzene	ND		2.0
Surrogate	Percent Recovery	Control Limits	
Dibromofluoromethane	93	70-123	
Toluene, d8	93	70-119	
4-Bromofluorobenzene	102	70-119	

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 6-7-05
 Date Analyzed: 6-7-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-033-02
 Client ID: DEV-2-052705

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		2.0
Chloromethane	ND		2.0
Vinyl Chloride	ND		2.0
Bromomethane	ND		2.0
Chloroethane	ND		2.0
Trichlorofluoromethane	ND		2.0
1,1-Dichloroethene	ND		2.0
Iodomethane	ND		10
Methylene Chloride	ND		10
(trans) 1,2-Dichloroethene	ND		2.0
1,1-Dichloroethane	ND		2.0
2,2-Dichloropropane	ND		2.0
(cis) 1,2-Dichloroethene	2.8		2.0
Bromochloromethane	ND		2.0
Chloroform	ND		2.0
1,1,1-Trichloroethane	ND		2.0
Carbon Tetrachloride	ND		2.0
1,1-Dichloropropene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
1,2-Dichloropropane	ND		2.0
Dibromomethane	ND		2.0
Bromodichloromethane	ND		2.0
2-Chloroethyl Vinyl Ether	ND		10
(cis) 1,3-Dichloropropene	ND		2.0
(trans) 1,3-Dichloropropene	ND		2.0

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 06-033-02
 Client ID: DEV-2-052705

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		2.0
Tetrachloroethene	440		2.0
1,3-Dichloropropane	ND		2.0
Dibromochloromethane	ND		2.0
1,2-Dibromoethane	ND		2.0
Chlorobenzene	ND		2.0
1,1,1,2-Tetrachloroethane	ND		2.0
Bromoform	ND		10
Bromobenzene	ND		2.0
1,1,2,2-Tetrachloroethane	ND		2.0
1,2,3-Trichloropropane	ND		2.0
2-Chlorotoluene	ND		2.0
4-Chlorotoluene	ND		2.0
1,3-Dichlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
1,2-Dichlorobenzene	ND		2.0
1,2-Dibromo-3-chloropropane	ND		10
1,2,4-Trichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0
1,2,3-Trichlorobenzene	ND		2.0
Surrogate	Percent Recovery		Control Limits
Dibromofluoromethane	93		70-123
Toluene, d8	93		70-119
4-Bromofluorobenzene	101		70-119

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 6-7-05
 Date Analyzed: 6-7-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-033-03
 Client ID: DEV-3-052705

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		2.0
Chloromethane	ND		2.0
Vinyl Chloride	ND		2.0
Bromomethane	ND		2.0
Chloroethane	ND		2.0
Trichlorofluoromethane	ND		2.0
1,1-Dichloroethene	ND		2.0
Iodomethane	ND		10
Methylene Chloride	ND		10
(trans) 1,2-Dichloroethene	ND		2.0
1,1-Dichloroethane	ND		2.0
2,2-Dichloropropane	ND		2.0
(cis) 1,2-Dichloroethene	2.6		2.0
Bromochloromethane	ND		2.0
Chloroform	ND		2.0
1,1,1-Trichloroethane	ND		2.0
Carbon Tetrachloride	ND		2.0
1,1-Dichloropropene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethene	ND		2.0
1,2-Dichloropropane	ND		2.0
Dibromomethane	ND		2.0
Bromodichloromethane	ND		2.0
2-Chloroethyl Vinyl Ether	ND		10
(cis) 1,3-Dichloropropene	ND		2.0
(trans) 1,3-Dichloropropene	ND		2.0

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 06-03-001

HALOGENATED VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 06-033-03
 Client ID DEV-3-052705

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		2.0
Tetrachloroethene	310		2.0
1,3-Dichloropropane	ND		2.0
Dibromochloromethane	ND		2.0
1,2-Dibromoethane	ND		2.0
Chlorobenzene	ND		2.0
1,1,1,2-Tetrachloroethane	ND		2.0
Bromoform	ND		10
Bromobenzene	ND		2.0
1,1,1,2-Tetrachloroethane	ND		2.0
1,2,3-Trichloropropane	ND		2.0
2-Chlorotoluene	ND		2.0
4-Chlorotoluene	ND		2.0
1,3-Dichlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
1,2-Dichlorobenzene	ND		2.0
1,2-Dibromo-3-chloropropane	ND		10
1,2,4-Trichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0
1,2,3-Trichlorobenzene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	90	70-123
Toluene, d3	96	70-119
4-Bromofluorobenzene	98	70-119

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 613-001

**HALOGENATED VOLATILES by EPA 8260B
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Date Extracted: 6-7-05

Date Analyzed: 6-7-05

Matrix: Water

Units: ug/L (ppb)

Lab ID: MB0607W1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 603-001

**HALOGENATED VOLATILES by EPA 8260B
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Lab ID: MB0607W1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromoforn	ND		1.0
Bromobenzene	ND		0.20
1,1,1,2,2-Pentachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20
Surrogate	Percent Recovery		Control Limits
Dibromofluoromethane	95		70-123
Toluene, d8	93		70-119
4-Bromofluorobenzene	99		70-119

Date of Report: June 10, 2005
 Samples Submitted: June 2, 2005
 Laboratory Reference: 0506-033
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B MS/MSD QUALITY CONTROL

Date Extracted: 6-7-05
 Date Analyzed: 6-7-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-032-07

Compound	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	ND	10.0	7.97	80	7.64	76	70-130	
Benzene	ND	10.0	9.47	95	8.95	90	71-128	
Trichloroethene	ND	10.0	8.88	89	8.69	87	76-124	
Toluene	ND	10.0	9.89	99	9.48	95	74-124	
Chlorobenzene	ND	10.0	10.1	101	9.63	96	72-118	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	4	17	
Benzene	6	13	
Trichloroethene	2	12	
Toluene	4	14	
Chlorobenzene	5	9	



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of co-eluting target compounds.
- G - Insufficient sample quantity for duplicate analysis.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- O - Hydrocarbons indicative of diesel fuel are present in the sample and are impacting the gasoline result.
- P - The RPL of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a silica gel cleanup procedure.
- Y - Sample extract treated with an acid/silica gel cleanup procedure.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Page 1 of 1

Laboratory Number:

06-033

Project Number: 192-AL-01

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☐ 2 Day ☐ 3 Day

☒ Standard (7 working days)

☒ Standard (7 working days)

(other)

Date	Time	Matrix	# of Cont.
Sampled	Sampled	Sampled	Sampled

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C / SIM

PCBs by 8082

Pesticides by 8081A

Herbicides by 8151A

Total RCRA Metals (8)	
-----------------------	--

TCLP Metals

HEM by 1664

VPH

EPH	
-----	--

% Moisture	
------------	--

[illegible]

Signature

Company

Date _____

Time

Comments/Special Instructions:

Relinquished by

Received by

Relinquished by

Received by

Relinquished by

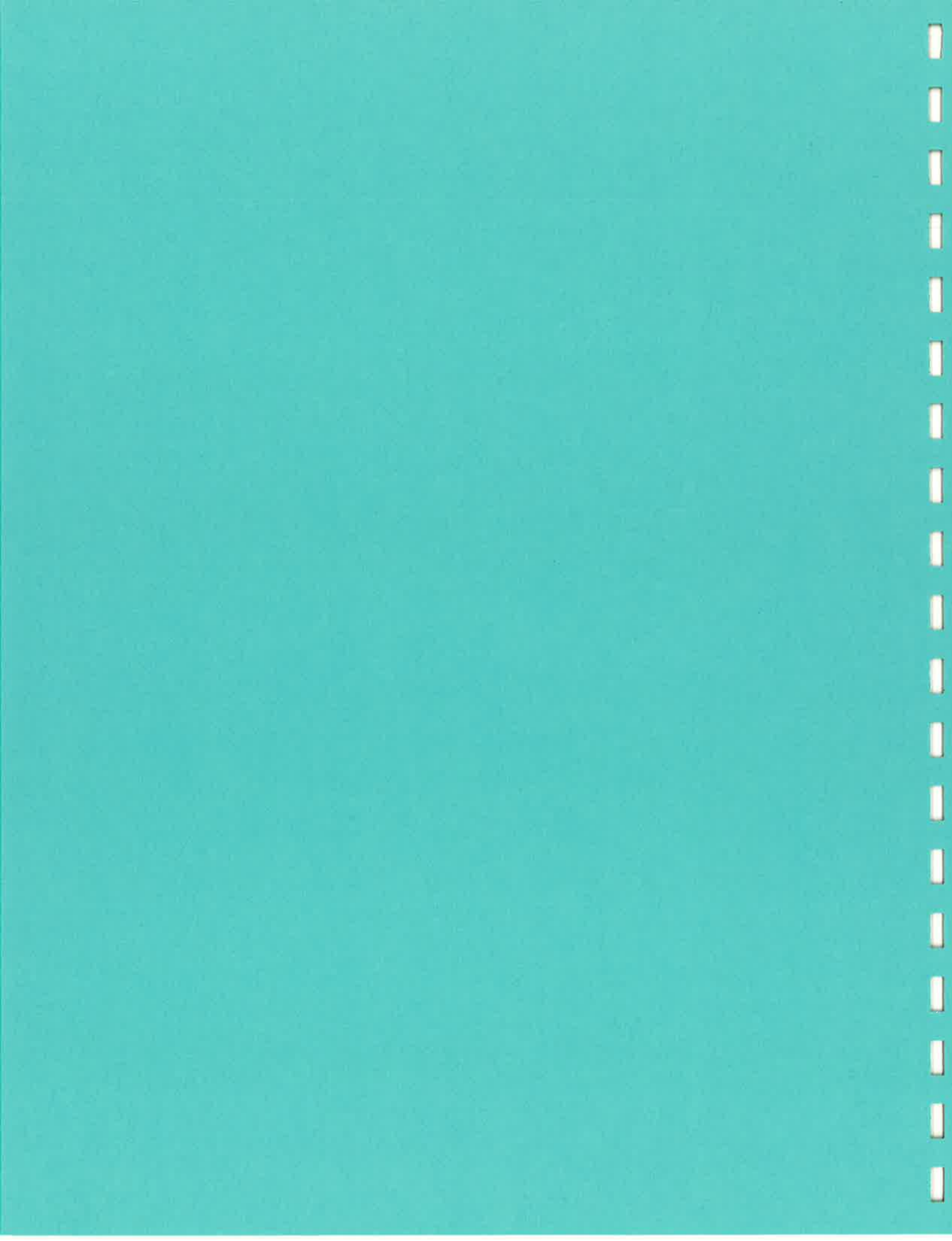
Received by

Reviewed by/Date

Reviewed by/Date

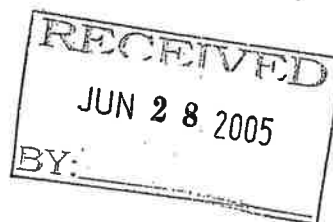
Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy





June 24, 2005



Jeff Kaspar
Farallon Consulting, LLC
320 3rd Avenue NE, Suite 200
Issaquah, WA 98027

Re: Analytical Data for Project 603-001
Laboratory Reference No. 0506-123

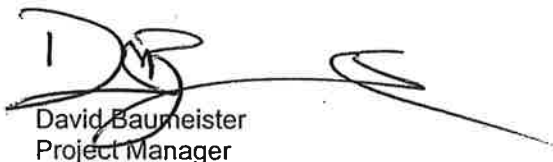
Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on June 13, 2005.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

Case Narrative

Samples were collected on June 9 & 10, 2005 and received by the laboratory on June 13, 2005. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

NWTPH-Gx/BTEX

Date Extracted: 6-20-05
 Date Analyzed: 6-20-05

Matrix: Water
 Units: ug/L (ppb)

Client ID: **MW1-061005**
 Lab ID: 06-123-01

MW2-060905
 06-123-03

	Result	Flags	PQL	Result	Flags	PQL
Benzene	ND		1.0	ND		1.0
Toluene	ND		1.0	ND		1.0
Ethyl Benzene	ND		1.0	ND		1.0
m,p-Xylene	ND		1.0	ND		1.0
o-Xylene	ND		1.0	ND		1.0
TPH-Gas	ND		100	ND		100
Surrogate Recovery:						
Fluorobenzene	100%			93%		

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

NWTPH-Gx/BTEX

Date Extracted: 6-20-05
Date Analyzed: 6-20-05

Matrix: Water
Units: ug/L (ppb)

Client ID: **MW3-061005**
Lab ID: 06-123-04

MW4-060905
06-123-05

	Result	Flags	PQL	Result	Flags	PQL
Benzene	ND		1.0	ND		1.0
Toluene	ND		1.0	ND		1.0
Ethyl Benzene	ND		1.0	ND		1.0
m,p-Xylene	ND		1.0	ND		1.0
o-Xylene	ND		1.0	ND		1.0
TPH-Gas	ND		100	ND		100
Surrogate Recovery:						
Fluorobenzene	97%			105%		

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

NWTPH-Gx/BTEX

Date Extracted: 6-20-05
 Date Analyzed: 6-20-05

Matrix: Water
 Units: ug/L (ppb)

Client ID:	MW5-060905	MW6-061005
Lab ID:	06-123-06	06-123-07

	Result	Flags	PQL	Result	Flags	PQL
Benzene	ND		1.0	ND		1.0
Toluene	ND		1.0	ND		1.0
Ethyl Benzene	ND		1.0	ND		1.0
m,p-Xylene	ND		1.0	ND		1.0
o-Xylene	ND		1.0	ND		1.0
TPH-Gas	ND		100	ND		100
Surrogate Recovery:						
Fluorobenzene	104%			105%		

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

NWTPH-Gx/BTEX

Date Extracted: 6-20-05
Date Analyzed: 6-20-05

Matrix: Water
Units: ug/L (ppb)

Client ID: **MW7-060905**
Lab ID: 06-123-08

MW8-961005
06-123-09

	Result	Flags	PQL	Result	Flags	PQL
Benzene	ND		1.0	ND		1.0
Toluene	ND		1.0	ND		1.0
Ethyl Benzene	ND		1.0	ND		1.0
m,p-Xylene	ND		1.0	ND		1.0
o-Xylene	ND		1.0	ND		1.0
TPH-Gas	ND		100	ND		100
Surrogate Recovery:						
Fluorobenzene	105%			106%		

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

NWTPH-Gx/BTEX

Date Extracted: 6-20-05
Date Analyzed: 6-20-05

Matrix: Water
Units: ug/L (ppb)

Client ID: **MW9-061005**
Lab ID: 06-123-10

MW10-060905
06-123-11

	Result	Flags	PQL	Result	Flags	PQL
Benzene	ND		1.0	ND		1.0
Toluene	ND		1.0	ND		1.0
Ethyl Benzene	ND		1.0	ND		1.0
m,p-Xylene	ND		1.0	ND		1.0
o-Xylene	ND		1.0	ND		1.0
TPH-Gas	ND		100	ND		100
Surrogate Recovery:						
Fluorobenzene	106%			104%		

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

**NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL**

Date Extracted: 6-20-05
Date Analyzed: 6-20-05

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0620W1

	Result	Flags	PQL
Benzene	ND		1.0
Toluene	ND		1.0
Ethyl Benzene	ND		1.0
m,p-Xylene	ND		1.0
o-Xylene	ND		1.0
TPH-Gas	ND		100
Surrogate Recovery: Fluorobenzene	97%		

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

**NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL**

Date Extracted: 6-20-05
Date Analyzed: 6-20-05

Matrix: Water
Units: ug/L (ppb)

Lab ID:	06-165-01 Original	06-165-01 Duplicate	RPD	Flags
Benzene	ND	ND	NA	
Toluene	ND	ND	NA	
Ethyl Benzene	ND	ND	NA	
m,p-Xylene	ND	ND	NA	
o-Xylene	ND	ND	NA	
TPH-Gas	ND	ND	NA	
Surrogate Recovery: Fluorobenzene	105%	105%		

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

**NWTPH-Gx/BTEX
 MS/MSD QUALITY CONTROL**

Date Extracted: 6-20-05
 Date Analyzed: 6-20-05

Matrix: Water
 Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	06-165-01 MS	Percent Recovery	06-165-01 MSD	Percent Recovery	RPD	Flags
Benzene	51.0	102	52.7	105	3	
Toluene	51.9	104	53.7	107	4	
Ethyl Benzene	52.0	104	53.9	108	4	
m,p-Xylene	51.7	103	53.6	107	3	
o-Xylene	51.8	104	53.9	108	4	
Surrogate Recovery:						
Fluorobenzene	99%		100%			

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

NWTPH-Dx

Date Extracted: 6-14-05
Date Analyzed: 6-14-05

Matrix: Water
Units: mg/L (ppm)

Client ID:	MW1-061005	MW8-061005	MW9-061005
Lab ID:	06-123-01	06-123-09	06-123-10
Diesel Range:	ND	ND	ND
PQL:	0.26	0.26	0.25
Identification:	---	---	---
Lube Oil Range:	ND	ND	ND
PQL:	0.41	0.41	0.40
Identification:	---	---	---
Surrogate Recovery o-Terphenyl:	139%	117%	112%
Flags:	Y	Y	Y

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-14-05
Date Analyzed: 6-15-05

Matrix: Water
Units: mg/L (ppm)

Lab ID: MB0614W1

Diesel Range: ND
PQL: 0.25

Identification: ---

Lube Oil Range: ND
PQL: 0.40

Identification: ---

Surrogate Recovery
o-Terphenyl: 132%

Flags: Y

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-14-05
Date Analyzed: 6-15-05

Matrix: Water
Units: mg/L (ppm)

Lab ID: 06-117-01 06-117-01 DUP

Diesel Range: ND ND
PQL: 0.28 0.26

RPD: N/A

Surrogate Recovery
o-Terphenyl: 83% 80%

Flags: Y Y

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B

page 1 of 2

Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-01
 Client ID: MW1-061005

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		10
Chloromethane	ND		10
Vinyl Chloride	ND		10
Bromomethane	ND		10
Chloroethane	ND		10
Trichlorofluoromethane	ND		10
1,1-Dichloroethene	ND		10
Iodomethane	ND		50
Methylene Chloride	ND		50
(trans) 1,2-Dichloroethene	ND		10
1,1-Dichloroethane	ND		10
2,2-Dichloropropane	ND		10
(cis) 1,2-Dichloroethene	ND		10
Bromochloromethane	ND		10
Chloroform	ND		10
1,1,1-Trichloroethane	ND		10
Carbon Tetrachloride	ND		10
1,1-Dichloropropene	ND		10
1,2-Dichloroethane	ND		10
Trichloroethene	ND		10
1,2-Dichloropropane	ND		10
Dibromomethane	ND		10
Bromodichloromethane	ND		10
2-Chloroethyl Vinyl Ether	ND		50
(cis) 1,3-Dichloropropene	ND		10
(trans) 1,3-Dichloropropene	ND		10

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 2 of 2

Lab ID: 06-123-01
 Client ID: MW1-061005

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		10
Tetrachloroethene	1100		10
1,3-Dichloropropane	ND		10
Dibromochloromethane	ND		10
1,2-Dibromoethane	ND		10
Chlorobenzene	ND		10
1,1,1,2-Tetrachloroethane	ND		10
Bromoform	ND		50
Bromobenzene	ND		10
1,1,2,2-Tetrachloroethane	ND		10
1,2,3-Trichloropropane	ND		10
2-Chlorotoluene	ND		10
4-Chlorotoluene	ND		10
1,3-Dichlorobenzene	ND		10
1,4-Dichlorobenzene	ND		10
1,2-Dichlorobenzene	ND		10
1,2-Dibromo-3-chloropropane	ND		50
1,2,4-Trichlorobenzene	ND		10
Hexachlorobutadiene	ND		10
1,2,3-Trichlorobenzene	ND		10

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	70-123
Toluene, d8	88	70-119
4-Bromofluorobenzene	87	70-119

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA #260B
 page 1 of 2

Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-02
 Client ID: MW1D-061005

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2 Dichloroethene	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	0.25		0.20
Bromochloromethane	ND		0.20
Chloroform	2.0		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	0.30		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	0.25		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 2 of 2

Lab ID: 06-123-02
 Client ID: MW1D-061005

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	50		0.40
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromooethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromoform	ND		1.0
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	70-123
Toluene, d8	89	70-119
4-Bromofluorobenzene	86	70-119

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 6' 3-001

HALOGENATED VOLATILES by EPA 8260B
 page 1 of 2

Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-03
 Client ID: MW2-060905

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		10
Chloromethane	ND		10
Vinyl Chloride	ND		10
Bromomethane	ND		10
Chloroethane	ND		10
Trichlorofluoromethane	ND		10
1,1-Dichloroethene	ND		10
Iodomethane	ND		50
Methylene Chloride	ND		50
(trans) 1,2-Dichloroethene	ND		10
1,1-Dichloroethane	ND		10
2,2-Dichloropropane	ND		10
(cis) 1,2-Dichloroethene	ND		10
Bromochloromethane	ND		10
Chloroform	ND		10
1,1,1-Trichloroethane	ND		10
Carbon Tetrachloride	ND		10
1,1-Dichloropropene	ND		10
1,2-Dichloroethane	ND		10
Trichloroethene	ND		10
1,2-Dichloropropane	ND		10
Dibromomethane	ND		10
Bromodichloromethane	ND		10
2-Chloroethyl Vinyl Ether	ND		50
(cis) 1,3-Dichloropropene	ND		10
(trans) 1,3 Dichloropropene	ND		10

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 2 of 2

Lab ID: 06-123-03
 Client ID: MW2-060905

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		10
Tetrachloroethene	2100		10
1,3-Dichloropropane	ND		10
Dibromochloromethane	ND		10
1,2-Dibromoethane	ND		10
Chlorobenzene	ND		10
1,1,1,2-Tetrachloroethane	ND		10
Bromoform	ND		50
Bromobenzene	ND		10
1,1,2,2-Tetrachloroethane	ND		10
1,2,3-Trichloropropane	ND		10
2-Chlorotoluene	ND		10
4-Chlorotoluene	ND		10
1,3-Dichlorobenzene	ND		10
1,4-Dichlorobenzene	ND		10
1,2-Dichlorobenzene	ND		10
1,2-Dibromo-3-chloropropane	ND		50
1,2,4-Trichlorobenzene	ND		10
Hexachlorobutadiene	ND		10
1,2,3-Trichlorobenzene	ND		10

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	70-123
Toluene, d3	87	70-119
4-Bromofluorobenzene	86	70-119

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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-04
 Client ID: MW3-061005

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		10
Chloromethane	ND		10
Vinyl Chloride	ND		10
Bromomethane	ND		10
Chloroethane	ND		10
Trichlorofluoromethane	ND		10
1,1-Dichloroethene	ND		10
Iodomethane	ND		50
Methylene Chloride	ND		50
(trans) 1,2-Dichloroethene	ND		10
1,1-Dichloroethane	ND		10
2,2-Dichloropropane	ND		10
(cis) 1,2-Dichloroethene	ND		10
Bromochloromethane	ND		10
Chloroform	ND		10
1,1,1-Trichloroethane	ND		10
Carbon Tetrachloride	ND		10
1,1-Dichloropropene	ND		10
1,2-Dichloroethane	ND		10
Trichloroethene	ND		10
1,2-Dichloropropane	ND		10
Dibromomethane	ND		10
Bromodichloromethane	ND		10
2-Chloroethyl Vinyl Ether	ND		50
(cis) 1,3-Dichloropropene	ND		10
(trans) 1,3-Dichloropropene	ND		10

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Lab ID: 06-123-04
 Client ID: MW3-061005

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		10
Tetrachloroethene	2100		10
1,3-Dichloropropane	ND		10
Dibromochloromethane	ND		10
1,2-Dibromoethane	ND		10
Chlorobenzene	ND		10
1,1,1,2-Tetrachloroethane	ND		10
Bromoforr	ND		50
Bromobenzene	ND		10
1,1,2,2-Tetrachloroethane	ND		10
1,2,3-Trichloropropane	ND		10
2-Chlorotoluene	ND		10
4-Chlorotoluene	ND		10
1,3-Dichlorobenzene	ND		10
1,4-Dichlorobenzene	ND		10
1,2-Dichlorobenzene	ND		10
1,2-Dibromo-3-chloropropane	ND		50
1,2,4-Trichlorobenzene	ND		10
Hexachlorobutadiene	ND		10
1,2,3-Trichlorobenzene	ND		10

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	70-123
Toluene, d8	88	70-119
4-Bromofluorobenzene	86	70-119

Date of Report: June 24, 2005
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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-05
 Client ID: MW4-060905

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		1.0
Chloromethane	ND		1.0
Vinyl Chloride	ND		1.0
Bromomethane	ND		1.0
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		1.0
1,1-Dichloroethene	ND		1.0
Iodomethane	ND		5.0
Methylene Chloride	ND		5.0
(trans) 1,2-Dichloroethene	ND		1.0
1,1-Dichloroethane	ND		1.0
2,2-Dichloropropane	ND		1.0
(cis) 1,2-Dichloroethene	ND		1.0
Bromochloromethane	ND		1.0
Chloroform	ND		1.0
1,1,1-Trichloroethane	ND		1.0
Carbon Tetrachloride	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2-Dichloroethane	ND		1.0
Trichloroethene	ND		1.0
1,2-Dichloropropane	ND		1.0
Dibromomethane	ND		1.0
Bromodichloromethane	ND		1.0
2-Chloroethyl Vinyl Ether	ND		5.0
(cis) 1,3-Dichloropropene	ND		1.0
(trans) 1,3-Dichloropropene	ND		1.0

Date of Report: June 24, 2005
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Lab ID: 06-123-05
 Client ID: MW4-060905

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		1.0
Tetrachloroethene	230		1.0
1,3-Dichloropropane	ND		1.0
Dibromochloromethane	ND		1.0
1,2-Dibromoethane	ND		1.0
Chlorobenzene	ND		1.0
1,1,1,2-Tetrachloroethane	ND		1.0
Bromoform	ND		5.0
Bromobenzene	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,2,3-Trichloropropane	ND		1.0
2-Chlorotoluene	ND		1.0
4-Chlorotoluene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		1.0
Hexachlorobutadiene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	70-123
Toluene, d8	88	70-119
4-Bromofluorobenzene	86	70-119

Date of Report: June 24, 2005
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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: 06-123-06
 Client ID: MW5-060905

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		1.0
Chloromethane	ND		1.0
Vinyl Chloride	ND		1.0
Bromomethane	ND		1.0
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		1.0
1,1-Dichloroethene	ND		1.0
Iodomethane	ND		5.0
Methylene Chloride	ND		5.0
(trans) 1,2-Dichloroethene	ND		1.0
1,1-Dichloroethane	ND		1.0
2,2-Dichloropropane	ND		1.0
(cis) 1,2-Dichloroethene	ND		1.0
Bromochloromethane	ND		1.0
Chloroform	ND		1.0
1,1,1-Trichloroethane	ND		1.0
Carbon Tetrachloride	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2-Dichloroethane	ND		1.0
Trichloroethene	ND		1.0
1,2-Dichloropropane	ND		1.0
Dibromomethane	ND		1.0
Bromodichloromethane	ND		1.0
2-Chloroethyl Vinyl Ether	ND		5.0
(cis) 1,3-Dichloropropene	ND		1.0
(trans) 1,3-Dichloropropene	ND		1.0

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Lab ID: 06-123-06
 Client ID: MW5-060905

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		1.0
Tetrachloroethene	150		1.0
1,3-Dichloropropane	ND		1.0
Dibromochloromethane	ND		1.0
1,2-Dibromoethane	ND		1.0
Chlorobenzene	ND		1.0
1,1,1,2-Tetrachloroethane	ND		1.0
Bromoform	ND		5.0
Bromobenzene	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,2,3-Trichloropropane	ND		1.0
2-Chlorotoluene	ND		1.0
4-Chlorotoluene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		1.0
Hexachlorobutadiene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	86	70-123
Toluene, d8	88	70-119
4-Bromofluorobenzene	84	70-119

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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: 06-123-07
 Client ID: MW6-061005

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		1.0
Chloromethane	ND		1.0
Vinyl Chloride	ND		1.0
Bromomethane	ND		1.0
Chloroethane	ND		1.0
Trichlorofluoromethane	ND		1.0
1,1-Dichloroethene	ND		1.0
Iodomethane	ND		5.0
Methylene Chloride	ND		5.0
(trans) 1,2-Dichloroethene	ND		1.0
1,1-Dichloroethane	ND		1.0
2,2-Dichloropropane	ND		1.0
(cis) 1,2-Dichloroethene	ND		1.0
Bromochloromethane	ND		1.0
Chloroform	ND		1.0
1,1,1-Trichloroethane	ND		1.0
Carbon Tetrachloride	ND		1.0
1,1-Dichloropropene	ND		1.0
1,2-Dichloroethane	ND		1.0
Trichloroethylene	ND		1.0
1,2-Dichloropropane	ND		1.0
Dibromomethane	ND		1.0
Bromodichloromethane	ND		1.0
2-Chloroethyl Vinyl Ether	ND		5.0
(cis) 1,3-Dichloropropene	ND		1.0
(trans) 1,3-Dichloropropene	ND		1.0

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Lab ID: 06-123-07
 Client ID: MW6-061005

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		1.0
Tetrachloroethene	160		1.0
1,3-Dichloropropane	ND		1.0
Dibromochloromethane	ND		1.0
1,2-Dibromoethane	ND		1.0
Chlorobenzene	ND		1.0
1,1,1,2-Tetrachloroethane	ND		1.0
Bromoforn	ND		5.0
Bromobenzene	ND		1.0
1,1,2,2-Tetrachloroethane	ND		1.0
1,2,3-Trichloropropane	ND		1.0
2-Chlorotoluene	ND		1.0
4-Chlorotoluene	ND		1.0
1,3-Dichlorobenzene	ND		1.0
1,4-Dichlorobenzene	ND		1.0
1,2-Dichlorobenzene	ND		1.0
1,2-Dibromo-3-chloropropane	ND		5.0
1,2,4-Trichlorobenzene	ND		1.0
Hexachlorobutadiene	ND		1.0
1,2,3-Trichlorobenzene	ND		1.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	70-123
Toluene, d8	88	70-119
4-Bromofluorobenzene	86	70-119

Date of Report: June 24, 2005
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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

 Matrix: Water
 Units: ug/L (ppb)

 Lab ID: 06-123-08
 Client ID: MW7-060905

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		4.0
Chloromethane	ND		4.0
Vinyl Chloride	ND		4.0
Bromomethane	ND		4.0
Chloroethane	ND		4.0
Trichlorofluoromethane	ND		4.0
1,1-Dichloroethene	ND		4.0
Iodomethane	ND		20
Methylene Chloride	ND		20
(trans) 1,2-Dichloroethene	ND		4.0
1,1-Dichloroethane	ND		4.0
2,2-Dichloropropane	ND		4.0
(cis) 1,2-Dichloroethene	ND		4.0
Bromochloromethane	ND		4.0
Chloroform	ND		4.0
1,1,1-Trichloroethane	ND		4.0
Carbon Tetrachloride	ND		4.0
1,1-Dichloropropene	ND		4.0
1,2-Dichloroethane	ND		4.0
Trichloroethene	ND		4.0
1,2-Dichloropropane	ND		4.0
Dibromomethane	ND		4.0
Bromodichloromethane	ND		4.0
2-Chloroethyl Vinyl Ether	ND		20
(cis) 1,3-Dichloropropene	ND		4.0
(trans) 1,3-Dichloropropene	ND		4.0

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 Project: 603-001

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Lab ID: 06-123-08
 Client ID: MW7-060905

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		4.0
Tetrachloroethene	930		4.0
1,3-Dichloropropane	ND		4.0
Dibromochloromethane	ND		4.0
1,2-Dibromoethane	ND		4.0
Chlorobenzene	ND		4.0
1,1,1,2-Tetrachloroethane	ND		4.0
Bromoform	ND		20
Bromobenzene	ND		4.0
1,1,2,2-Tetrachloroethane	ND		4.0
1,2,3-Trichloropropane	ND		4.0
2-Chlorotoluene	ND		4.0
4-Chlorotoluene	ND		4.0
1,3-Dichlorobenzene	ND		4.0
1,4-Dichlorobenzene	ND		4.0
1,2-Dichlorobenzene	ND		4.0
1,2-Dibromo-3-chloropropane	ND		20
1,2,4-Trichlorobenzene	ND		4.0
Hexachlorobutadiene	ND		4.0
1,2,3-Trichlorobenzene	ND		4.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	70-123
Toluene, d8	88	70-119
4-Bromofluorobenzene	85	70-119

Date of Report: June 24, 2005
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 Project: 6F3-001

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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-09
 Client ID: MW8-061005

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		4.0
Chloromethane	ND		4.0
Vinyl Chloride	ND		4.0
Bromomethane	ND		4.0
Chloroethane	ND		4.0
Trichlorofluoromethane	ND		4.0
1,1-Dichloroethene	ND		4.0
Iodomethane	ND		20
Methylene Chloride	ND		20
(trans) 1,2-Dichloroethene	ND		4.0
1,1-Dichloroethane	ND		4.0
2,2-Dichloropropane	ND		4.0
(cis) 1,2-Dichloroethene	11		4.0
Bromochloromethane	ND		4.0
Chloroform	ND		4.0
1,1,1-Trichloroethane	ND		4.0
Carbon Tetrachloride	ND		4.0
1,1-Dichloropropene	ND		4.0
1,2-Dichloroethane	ND		4.0
Trichloroethylene	5.9		4.0
1,2-Dichloropropane	ND		4.0
Dibromomethane	ND		4.0
Bromodichloromethane	ND		4.0
2-Chloroethyl Vinyl Ether	ND		20
(cis) 1,3-Dichloropropene	ND		4.0
(trans) 1,3-Dichloropropene	ND		4.0

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Lab ID: 06-123-09
 Client ID: MW8-061005

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		4.0
Tetrachloroethene	800		4.0
1,3-Dichloropropane	ND		4.0
Dibromochloromethane	ND		4.0
1,2-Dibromoethane	ND		4.0
Chlorobenzene	ND		4.0
1,1,1,2-Tetrachloroethane	ND		4.0
Bromoform	ND		20
Bromobenzene	ND		4.0
1,1,2,2-Tetrachloroethane	ND		4.0
1,2,3-Trichloropropane	ND		4.0
2-Chlorotoluene	ND		4.0
4-Chlorotoluene	ND		4.0
1,3-Dichlorobenzene	ND		4.0
1,4-Dichlorobenzene	ND		4.0
1,2-Dichlorobenzene	ND		4.0
1,2-Dibromo-3-chloropropane	ND		20
1,2,4-Trichlorobenzene	ND		4.0
Hexachlorobutadiene	ND		4.0
1,2,3-Trichlorobenzene	ND		4.0
Surrogate	Percent Recovery		Control Limits
Dibromofluoromethane	88		70-123
Toluene, d8	87		70-119
4-Bromofluorobenzene	85		70-119

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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-10
 Client ID: MW9-061005

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		4.0
Chloromethane	ND		4.0
Vinyl Chloride	ND		4.0
Bromomethane	ND		4.0
Chloroethane	ND		4.0
Trichlorofluoromethane	ND		4.0
1,1-Dichloroethene	ND		4.0
Iodomethane	ND		20
Methylene Chloride	ND		20
(trans) 1,2-Dichloroethene	ND		4.0
1,1-Dichloroethane	ND		4.0
2,2-Dichloropropane	ND		4.0
(cis) 1,2-Dichloroethene	6.5		4.0
Bromochloromethane	ND		4.0
Chloroform	ND		4.0
1,1,1-Trichloroethane	ND		4.0
Carbon Tetrachloride	ND		4.0
1,1-Dichloropropene	ND		4.0
1,2-Dichloroethane	ND		4.0
Trichloroethene	ND		4.0
1,2-Dichloropropane	ND		4.0
Dibromomethane	ND		4.0
Bromodichloromethane	ND		4.0
2-Chloroethyl Vinyl Ether	ND		20
(cis) 1,3-Dichloropropene	ND		4.0
(trans) 1,3-Dichloropropene	ND		4.0

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Lab ID: 06-123-10
 Client ID: MW9-061005

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		4.0
Tetrachloroethene	910		4.0
1,3-Dichloropropane	ND		4.0
Dibromochloromethane	ND		4.0
1,2-Dibromoethane	ND		4.0
Chlorobenzene	ND		4.0
1,1,1,2-Tetrachloroethane	ND		4.0
Bromoform	ND		20
Bromobenzene	ND		4.0
1,1,2,2-Tetrachloroethane	ND		4.0
1,2,3-Trichloropropane	ND		4.0
2-Chlorotoluene	ND		4.0
4-Chlorotoluene	ND		4.0
1,3-Dichlorobenzene	ND		4.0
1,4-Dichlorobenzene	ND		4.0
1,2-Dichlorobenzene	ND		4.0
1,2-Dibromo-3-chloropropane	ND		20
1,2,4-Trichlorobenzene	ND		4.0
Hexachlorobutadiene	ND		4.0
1,2,3-Trichlorobenzene	ND		4.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	70-123
Toluene, d8	87	70-119
4-Bromofluorobenzene	86	70-119

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Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-11
 Client ID: MW10-060905

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		2.0
Chloromethane	ND		2.0
Vinyl Chloride	ND		2.0
Bromomethane	ND		2.0
Chloroethane	ND		2.0
Trichlorofluoromethane	ND		2.0
1,1-Dichloroethene	ND		2.0
Iodomethane	ND		10
Methylene Chloride	ND		10
(trans) 1,2-Dichloroethene	ND		2.0
1,1-Dichloroethane	ND		2.0
2,2-Dichloropropane	ND		2.0
(cis) 1,2-Dichloroethene	ND		2.0
Bromochloromethane	ND		2.0
Chloroform	ND		2.0
1,1,1-Trichloroethane	ND		2.0
Carbon Tetrachloride	ND		2.0
1,1-Dichloropropene	ND		2.0
1,2-Dichloroethane	ND		2.0
Trichloroethylene	ND		2.0
1,2-Dichloropropane	ND		2.0
Dibromomethane	ND		2.0
Bromodichloromethane	ND		2.0
2-Chloroethyl Vinyl Ether	ND		10
(cis) 1,3-Dichloropropene	ND		2.0
(trans) 1,3-Dichloropropene	ND		2.0

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Lab ID: 06-123-11
 Client ID: MW10-060905

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		2.0
Tetrachloroethene	300		2.0
1,3-Dichloropropane	ND		2.0
Dibromochloromethane	ND		2.0
1,2-Dibromoethane	ND		2.0
Chlorobenzene	ND		2.0
1,1,1,2-Tetrachloroethane	ND		2.0
Bromoform	ND		10
Bromobenzene	ND		2.0
1,1,2,2-Tetrachloroethane	ND		2.0
1,2,3-Trichloropropane	ND		2.0
2-Chlorotoluene	ND		2.0
4-Chlorotoluene	ND		2.0
1,3-Dichlorobenzene	ND		2.0
1,4-Dichlorobenzene	ND		2.0
1,2-Dichlorobenzene	ND		2.0
1,2-Dibromo-3-chloropropane	ND		10
1,2,4-Trichlorobenzene	ND		2.0
Hexachlorobutadiene	ND		2.0
1,2,3-Trichlorobenzene	ND		2.0

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	70-123
Toluene, d8	89	70-119
4-Bromofluorobenzene	86	70-119

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 1 of 2

Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 06-123-12
 Client ID: AS1-061005

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
Bromochloromethane	ND		0.20
Chloroform	1.6		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B
 page 2 of 2

Lab ID: 06-123-12
 Client ID: AS1-061005

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	26		0.20
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromooethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromoform	ND		1.0
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	87	70-123
Toluene, d8	88	70-119
4-Bromofluorobenzene	84	70-119

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

**HALOGENATED VOLATILES by EPA 8260B
 METHOD BLANK QUALITY CONTROL**

page 1 of 2

Date Extracted: 6-15-05
 Date Analyzed: 6-15-05
 Matrix: Water
 Units: ug/L (ppb)
 Lab ID: MB0615W1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

**HALOGENATED VOLATILES by EPA 8260B
 METHOD BLANK QUALITY CONTROL**

page 2 of 2

Lab ID: MB0615W1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromoform	ND		1.0
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	88	70-123
Toluene, m	89	70-119
4-Bromofluorobenzene	85	70-119

Date of Report: June 24, 2005
 Samples Submitted: June 13, 2005
 Laboratory Reference: 0506-123
 Project: 603-001

HALOGENATED VOLATILES by EPA 8260B **SB/SBD QUALITY CONTROL**

Date Extracted: 6-15-05
 Date Analyzed: 6-15-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: SB0615W1

Compound	Spike Amount	SB	Percent Recovery	± BD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	9.23	92	9.11	91	70-130	
Benzene	10.0	9.96	100	9.57	96	70-130	
Trichloroethene	10.0	9.09	91	8.95	90	70-130	
Toluene	10.0	10.0	100	9.73	97	70-130	
Chlorobenzene	10.0	9.92	99	9.59	96	70-130	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	1	17	
Benzene	4	13	
Trichloroethene	2	12	
Toluene	3	14	
Chlorobenzene	3	9	

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

**TOTAL METALS
EPA 6010B**

Date Extracted: 6-16-05
Date Analyzed: 6-17,21&22-05

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-123-02
Client ID: MW1D-061005

Analyte	Method	Result	PQL
Calcium	6010B	18,000	1100
Iron	6010B	11000	56
Manganese	6010B	590	11

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

**TOTAL METALS
EPA 6010B**

Date Extracted: 6-16-05
Date Analyzed: 6-17,21&22-05

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-123-12
Client ID: AS1-061005

Analyte	Method	Result	PQL
Calcium	6010B	2000	1100
Iron	6010B	920	56
Manganese	6010B	940	11

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

**TOTAL METALS
EPA 6010B
METHOD BLANK QUALITY CONTROL**

Date Extracted: 6-16-05
Date Analyzed: 6-17,21&22-05

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0616W1

Analyte	Method	Result	PQL
Calcium	6010B	ND	1100
Iron	6010B	ND	56
Manganese	6010B	ND	11

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

**TOTAL METALS
EPA 6010B
DUPLICATE QUALITY CONTROL**

Date Extracted: 6-16-05
Date Analyzed: 6-17,21&22-05

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-139-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Calcium	8650	8890	3	1100	
Iron	6760	6270	8	56	
Manganese	104	97.2	7	11	

Date of Report: June 24, 2005
Samples Submitted: June 13, 2005
Laboratory Reference: 0506-123
Project: 603-001

**TOTAL METALS
EPA 6010B
MS/MSD QUALITY CONTROL**

Date Extracted: 6-16-05
Date Analyzed: 6-17,21&22-05

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-139-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Calcium	22000	29300	94	29200	93	0	
Iron	22000	26300	89	26100	88	1	
Manganese	1100	1110	91	1110	91	0	



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability where analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- G - Insufficient sample quantity for duplicate analysis.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- O - Hydrocarbons indicative of diesel fuel are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a silica gel cleanup procedure.
- Y - Sample extract treated with an acid/silica gel cleanup procedure.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



OnSite Environmental Inc.

14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Page 1 of 2

Turnaround Request
(in working days)

Laboratory Number: **06-123**

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☒ Standard (7 working days)

☐ (other)

Requested Analysis

Company: **Farallon**
Project Number: **603-001**
Project Name: **Five City Hards Laundry**
Project Manager: **Jeff Kasper**
Sampled by: **J Schmitt / B Johnson**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPP	NWTPP	NWTPP	Volatiles	Halogen	Semivolatile	PAHs	PCBs	Pesticides	Herbicides	Total F	TCLP	HEM	VPH	EPH	MA				% Moisture	
1	MW1-061005	6/10/05	1145	W	7		X	X		X																
2	MW1D-061005	↓	1245	↓	5					X												X				
3	MW2-060905	6/9/05	1700		5		X			X																
4	MW3-061005	6/10/05	1545		5		X			X																
5	MW4-060905	6/9/05	1400		5		X			X																
6	MW5-060905	↓	1245		5		X			X																
7	MW10-061005	6/10/05	0948		5		X			X																
8	MW7-060905	6/5/05	1110		5		X			X																
9	MW8-061005	6/10/05	1045		7		X	X		X																
10	MW9-061005	↓	1455		7		X	X		X																

	Signature	Company	Date	Time	Comments/Special Instructions:
Relinquished by	Kate Burt	Farallon	6/13/05	1:05	EDDS. Potential Stoddard solvent AT SITE. Please quantify Gx BTEX RESULTS AS Stoddard solvents if appropriate
Received by	Jeff Kasper	Farallon	"	"	
Relinquished by	Jeff Kasper	Farallon	"	1245	
Received by	M. Van	OSI	6/13/05	1345	
Relinquished by					
Received by					
Reviewed by/Date		Reviewed by/Date			Chromatograms with final report <input type="checkbox"/>



Monsite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 893-3881 • Fax: (425) 885-4603

Chain of Custody

Company:

Project Number:

Project Name:

Project Manager:

Sampled by:

Sample Identification

Lab ID

Date Sampled

Time Sampled

Matrix

of Cont.

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Dx

Volatiles by 8260B

Halogenated Volatiles by 8260B

Semivolatiles by 8270C

PAHs by 8270C / SIM

PCBs by 8082

Pesticides by 8081A

Herbicides by 8151A

Total RCRA Metals (8)

TCLP Metals

HEM by 1664

VPH

EPH

Major Contaminants

% Moisture

Turnaround Request (in working days)

Laboratory Number: 06-123

Requested Analysis

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☒ Standard (7 working days)

(other)

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished by

Received by

Relinquished by

Received by

Relinquished by

Received by

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

EDPs
Retentive standard solvent
Rease availability Gx BTEX
RESULTS AS standard solvent
IF appropriate

Major Contaminants

APPENDIX C
AIR SPARGE PILOT TEST RESULTS

**ADDITIONAL SUBSURFACE INVESTIGATION
AND FEASIBILITY TESTING REPORT**
TCP ID#NW1243

Former City Hand Laundry Property
1002 4th Street
Bremerton, Washington

Farallon PN: 603-001

Table C-1
Summary of Air Sparge Pilot Test Results AS-1
Former City Hand Laundry, Bremerton Washington
Farallon PN: 603-001

Pilot Test Well AS-1			MW-3	MW-2	MW-5	MW-9	MW-4	MW-10
			Distance from AS Pilot Test Well AS-1 (feet)					
			14	36	58	62	70	78
Time	Flow (scfm)	Pressure (PSI)	Monitoring Wellhead Pressure (Inches of Water)					
1340	0	0	-0.005	-0.03	0	0	-0.01	-0.01
1400	2.5	12	0.030	0.050	0.030	0.050	0.035	0.005
1408		11.8	0.105	0.025	0.040	0.025	0.020	0.020
1415		11.5	0.035	0.045	0.050	0.045	0.040	0.045
1430		11.45	0.030	0.040	0.020	0.040	0.015	0.055
1445		11.5	-	0.020	0.045	0.020	0.035	0.050
1505		11.5	0.090	0.080	0.080	0.080	0.080	0.110
1525		11.5	0.080	0.080	0.115	0.080	0.105	0.105
1545		11.5	0.135	0.105	0.080	0.105	0.115	0.145
1605		11.5	0.900	0.055	0.160	0.055	0.070	0.095
Maximum Observed Response			0.900	0.105	0.160	0.105	0.115	0.145
Pressure Change Relative to Background			0.905	0.135	0.160	0.105	0.125	0.155
1640	5	12.5	-	-	-	-	-	-
1648		12	0.085	0.065	0.095	0.075	0.085	0.130
1708		11.7	0.155	0.110	0.170	0.125	0.150	0.190
1730		11.6	0.155	0.120	0.160	0.125	0.150	0.215
1745		11.6	0.160	0.135	0.190	0.145	0.175	0.225
Maximum Observed Response			0.160	0.135	0.190	0.145	0.175	0.225
Pressure Change Relative to Background			0.165	0.165	0.190	0.145	0.185	0.235
1810	6.2	12.2	-	-	-	-	-	-
1845		12.2	0.165	0.11	0.185	0.145	0.175	0.24
1910		11.9	0.155	0.115	0.230	0.155	0.210	0.260
1925		11.9	0.16	0.135	0.21	0.15	0.195	0.26
Maximum Observed Response			0.165	0.135	0.230	0.155	0.210	0.260
Pressure Change Relative to Background			0.170	0.165	0.230	0.155	0.220	0.270
			Water Level Measurements (feet below TOC)					
1300	0	-	49.16	49.90	53.52	47.14	48.63	53.55
1620	2.5	-	49.12	49.88	53.49	47.15	48.61	53.48
1755	5	-	49.12	49.88	53.45	47.16	48.61	53.48
1935	6.2	-	49.12	49.87	53.45	47.14	48.61	53.46
Maximum Groundwater Level Change Relative to Background			0.04	0.03	0.07	0	0.02	0.09

NOTES:

Bold indicates a positive response, which is defined as a pressure change greater than 0.1 inches of water pressure change from the measured background pressure at time =0.

- = not measured

PSI = Pounds per square inch

scfm = standard cubic feet per minute

TOC = Top of well casing

Table C-2
Summary of Air Sparge Pilot Test Results MW-1D
Former City Hand Laundry, Bremerton Washington
Farallon PN: 603-001

Pilot Test Well MW-1D			MW-1	MW-9	MW-4	MW-8	MW-3	MW-5	MW-10
			Horizontal Distance from Sparge Well MW-1D (feet)						
			6	27	48	50	66	86	128
Time	Flow (scfm)	Pressure (PSI)	Monitoring Wellhead Pressure (Inches of Water)						
923	0	0	0.135	0.115	0.150	0.060	0.125	0.140	0.125
1014	2.5	13.25	0.130	0.115	0.175	0.640	0.150	0.160	0.140
1030		12.55	0.170	0.150	0.220	0.700	0.185	0.210	0.185
1050		12.4	0.165	0.150	0.205	0.700	0.165	0.195	0.165
1115		12.25	0.180	0.155	0.210	0.760	0.155	0.190	0.155
1135		12.35	0.180	0.160	0.240	0.820	0.210	0.230	0.215
1155		12.4	0.245	0.205	0.280	0.880	0.250	0.260	0.245
1220		12.35	0.260	0.225	0.310	0.000	0.265	0.290	0.250
1225		12.4	0.300	0.240	0.310	0.080	0.260	0.290	0.250
Maximum Observed Response			0.300	0.225	0.310	0.880	0.265	0.290	0.250
Pressure Change Relative to Background			0.165	0.110	0.160	0.820	0.140	0.150	0.125
1312	5	13.2	0.280	0.260	0.370	0.130	0.270	0.360	0.260
1327		12.8	0.340	0.270	0.360	0.200	0.290	0.300	0.280
1345		12.8	0.330	0.290	0.370	0.210	0.290	0.320	0.300
1405		12.8	0.330	0.290	0.370	0.250	0.330	0.370	0.320
1430		12.8	0.380	0.340	0.420	0.260	0.330	0.380	0.320
1445		12.8	0.370	0.320	0.410	0.270	0.320	0.370	0.340
Maximum Observed Response			0.380	0.340	0.420	0.270	0.330	0.380	0.340
Pressure Change Relative to Background			0.245	0.225	0.270	0.210	0.205	0.240	0.215
1500	6	13.2	0.380	0.340	0.450	0.420	0.360	0.390	0.340
1520		12.9	0.410	0.330	0.430	0.230	0.320	0.380	0.350
1535		12.8	0.345	0.290	0.390	0.260	0.290	0.340	0.320
1555		12.8	0.310	0.280	0.380	0.310	0.320	0.340	0.350
Maximum Observed Response			0.410	0.340	0.450	0.420	0.360	0.390	0.350
Pressure Change Relative to Background			0.275	0.225	0.300	0.360	0.235	0.250	0.225
			Water Level Measurements (feet below TOC)						
840	0	-	46.75	47.14	48.63	45.07	49.16	53.52	53.55
1240	2.5	-	46.67	47.10	48.58	45.12	49.10	53.44	53.44
1610	6	-	46.67	47.03	48.55	44.99	49.09	53.25	53.15
Maximum Groundwater Level Change Relative to Background			0.08	0.11	0.08	0.08	0.07	0.27	0.40

NOTES:

Bold indicates a positive response, which is defined as a pressure change greater than 0.1 inches of water pressure change from the measured background pressure at time =0.

- = not measured

PSI = Pounds per square inch

Figure C-1
Observation Well Pressure Change
Air Sparge Pilot Test Results AS-1
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

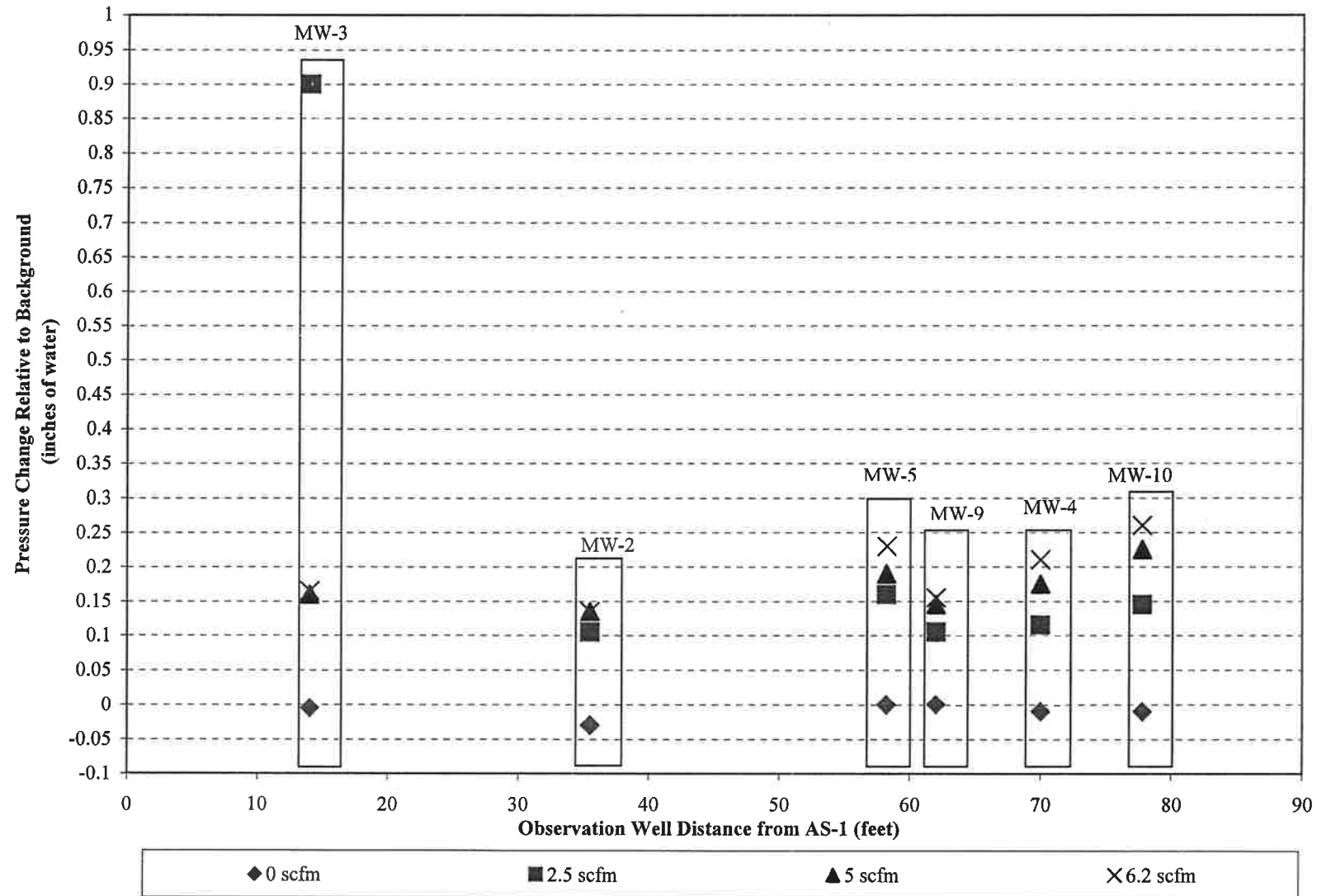


Figure C-2
Observation Well Groundwater Level Change
Air Sparge Pilot Test Results AS-1
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

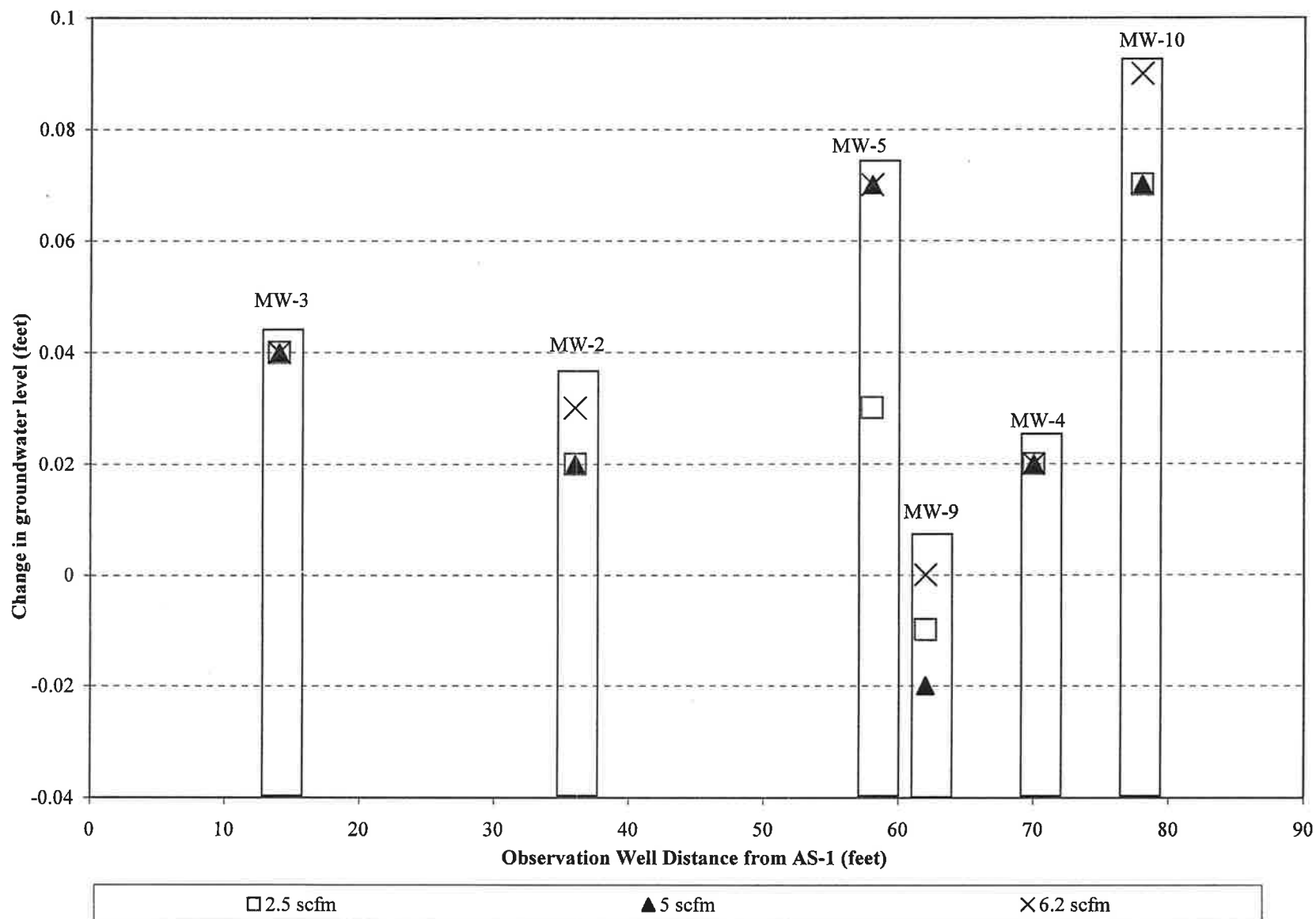


Figure C-3
Observation Well Pressure Change
Air Sparge Pilot Test Results MW-1D
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001

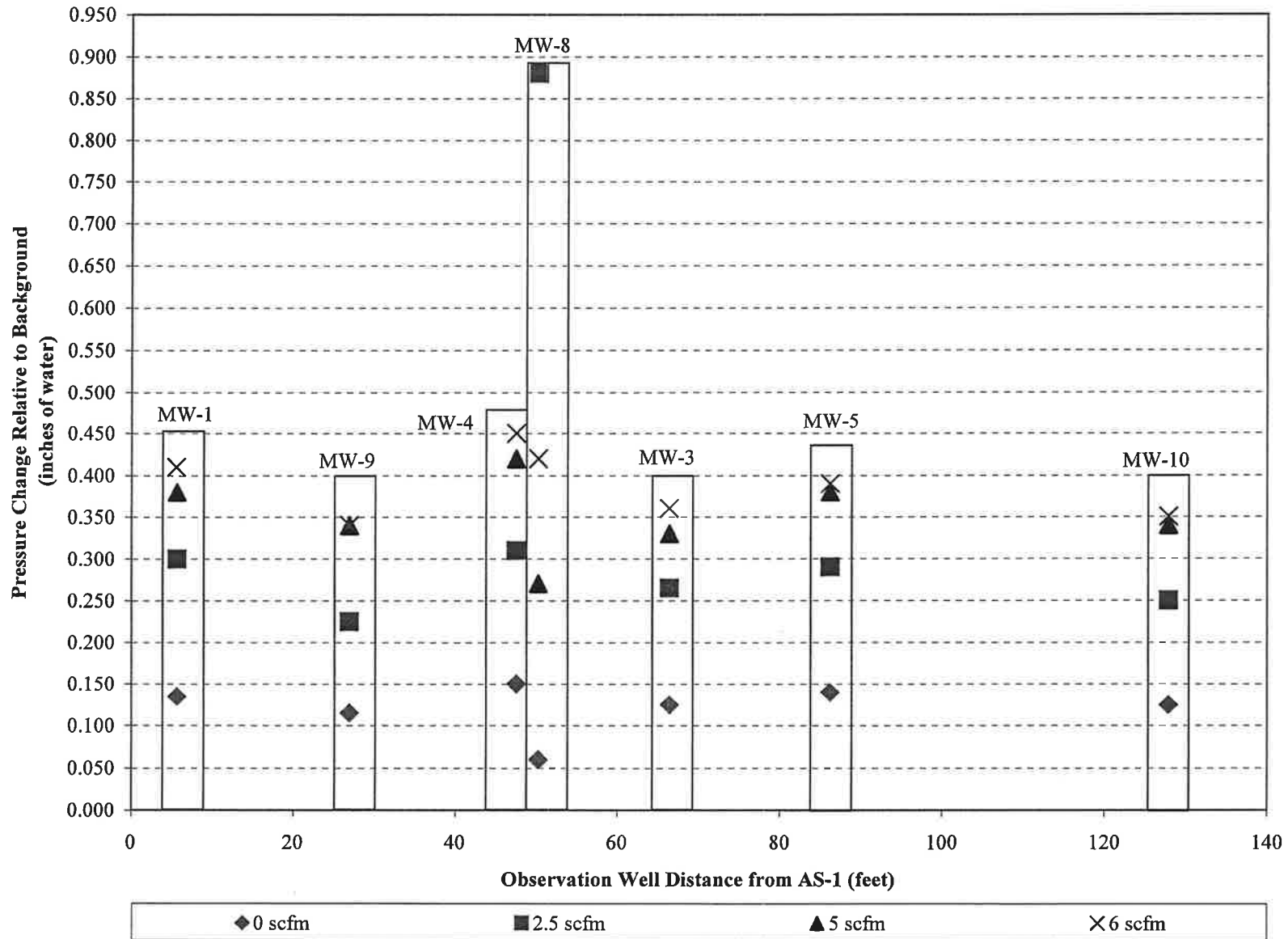
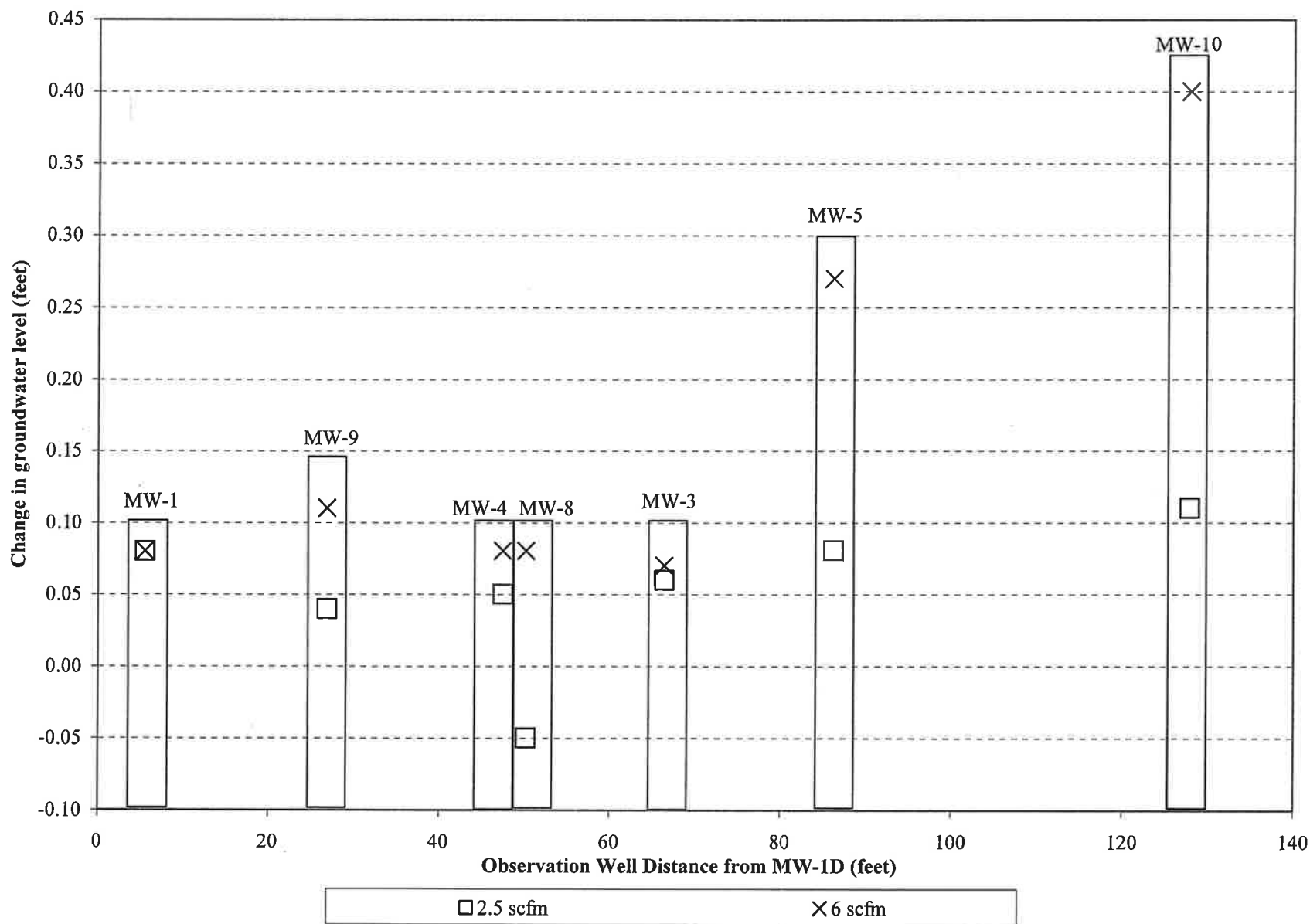


Figure C-4
Observation Well Groundwater Level Change
Air Sparge Pilot Test Results MW-1D
Former City Hand Laundry Property
Bremerton, Washington
Farallon PN: 603-001



**APPENDIX D
AERIAL PHOTOGRAPHS**

**ADDITIONAL SUBSURFACE INVESTIGATION
AND FEASIBILITY TESTING REPORT**

TCP ID#NW1243

**Former City Hand Laundry Property
1002 4th Street
Bremerton, Washington**

Farallon PN: 603-001



North

← **Site**

1977

South

WALKER & ASSOCIATES

North

← **Site**

1985

South

WALSH & ASSOCIATES

APPENDIX E
CHEMICAL OXIDATION BENCH-SCALE TEST RESULTS

**ADDITIONAL SUBSURFACE INVESTIGATION
AND FEASIBILITY TESTING REPORT
TCP ID#NW1243**

**Former City Hand Laundry Property
1002 4th Street
Bremerton, Washington**

Farallon PN: 603-001



May 24, 2005

Jeff Kaspar
Farallon Consulting, LLC
320 3rd Avenue NE, Suite 200
Issaquah, WA 98027

Re: Analytical Data for Project 603-001
Report of Findings, Permanganate Soil Oxidant Demand
Laboratory Reference No. 0505-059B

Dear Jeff:

OnSite Environmental, Inc. recently measured permanganate soil oxidant demand (SOD) of soil from Project 663-001. Soils were submitted on May 9, 2005.
The 7-Day SOD was found to be approximately 0.1 g KMnO_4/kg soil. The procedures and results are discussed in detail below.

Procedures

Three soil samples (AS1-60-61, AS1-65-65.5 and AS1-70-70.5) were composited and tested using various concentrations of KMnO_4 .
A preliminary test was performed to estimate the SOD of the soil. Two vials containing 20 g composited soil and 20 mL of 1g/kg and 5 g/kg KMnO_4 solution were prepared. The vials were capped, mixed by hand, then allowed to stand undisturbed. After 24 hours, the aqueous phases were filtered through a 2um filter and analyzed for residual KMnO_4 . The results were used to estimate the appropriate KMnO_4 dosages in the SOD test.
To measure SOD, three series of vials each containing composited soil and KMnO_4 solution were prepared. The initial conditions were as shown in Table 1. The vials were capped, and mixed intermittently by hand. Periodically, one vial from each series was destructively sampled and analyzed for residual KMnO_4 .

Date of Report: May 24, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059B
Project: 603-001

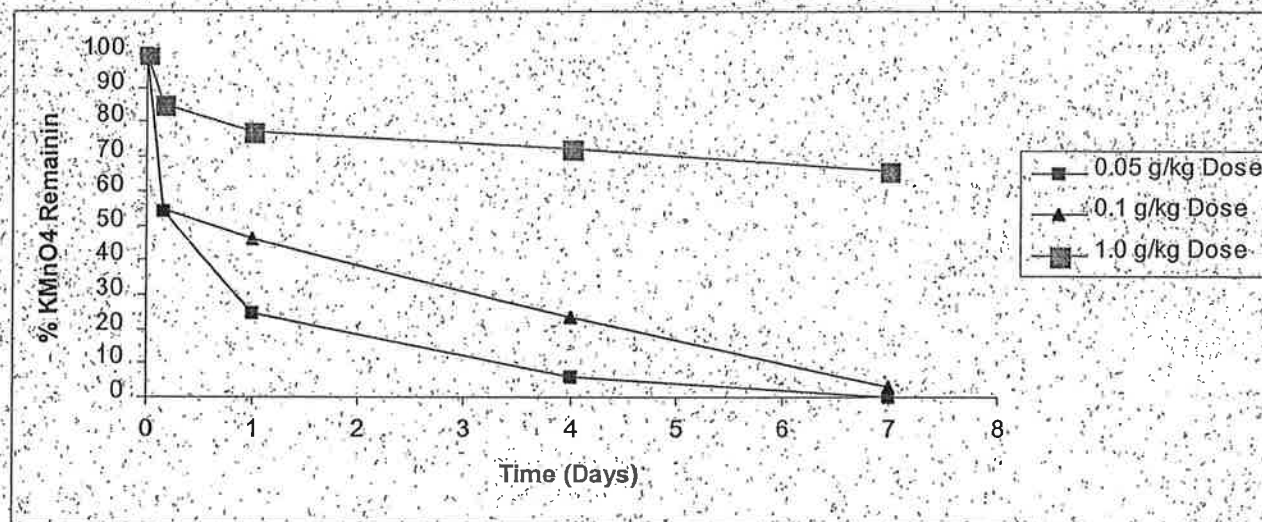
Table 1. SOD Test Conditions

Test ID	Soil, g	KMnO ₄ Soln Added, mL	Initial KMnO ₄ conc., g/L	Initial KMnO ₄ dose, g/kg soil
SOD-05	20	20	.05	.05
SOD-1	20	20	0.1	0.1
SOD-1	20	20	1.0	1.0

Results and Discussion

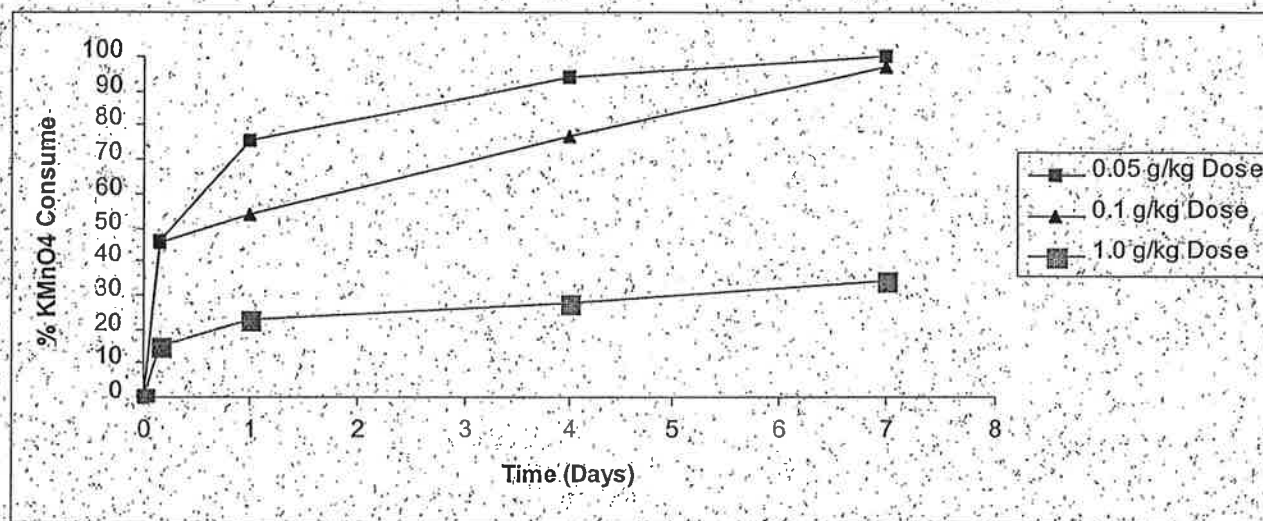
The KMnO_4 in the 1g/kg and the 5g/kg dosed samples were not consumed within the 24 hour time period; indicating a lower soil oxidant demand. Therefore three different doses were used as indicated in the above Table 1. Vials were sampled and analyzed for KMnO_4 concentration at 4 hour, 1 day, 4days, and 7 days. The results are summarized in the two figures below.

Figure 1. Percent of KMnO_4 Remaining



Date of Report: May 24, 2005
Samples Submitted: May 9, 2005
Laboratory Reference: 0505-059B
Project: 603-001

Figure 2. Percent of KMnO_4 Consumed



Conclusions

One hundred percent of the KMnO_4 was consumed within 7 days in the .05 g/kg Dose test and ninety seven percent in the 0.1 g/kg Dose test, while thirty four percent of the KMnO_4 was consumed within 7 days in the 1.0 g/kg Dose test.

While the seventh day concentrations for the lower dose indicates that the 7 day SOD would be greater than .05 g/kg (the fact that all KMnO_4 was consumed), the results for the 0.1 g/kg sample indicate an SOD of around 0.97 g/kg (the fact that consumption of permanganate leveled off at 97% after 7 days). The 7 day results for 1.0 g/kg sample shows that 34% of permanganate was consumed, indicating an SOD of 0.34 g/kg. That is possible since soil oxygen demand is documented to be dependant on the concentration of permanganate. The results from the lower concentration is more indicative of the actual SOD.

If you have any questions regarding this report, please do not hesitate to call me at (425) 883-3881. Thank you for the opportunity to be of service on this project.

Sincerely,

Arina Podnozova

Arina Podnozova
Chemist



**OnSite
Environmental Inc.**
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Page 1 of 5

Company:
FARALLON

Project Number:
603-001

Project Name:
FIRE CITY HAND LAUNDRY

Project Manager:
JEFF KASPAR

Sampled by:
JOHN SCHMITT

**Turnaround Request
(in working days)**

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Day ☐ 3 Day

☒ Standard (7 working days)

☐ _____ (other)

Laboratory Number: 05-059

14040 NE 30th Street • Redmond, WA 98052 Phone: (425) 883-3881 • Fax: (425) 885-4603																													
Company: FARALLON						(Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Standard (7 working days) <input type="checkbox"/> _____ (other)						Requested Analysis																	
Project Number: 6003-001																													
Project Name: FIVE CITY HAND LAUNDRY																													
Project Manager: JEFF KASPAR																													
Sampled by: JOHN SCHMITT																													
Lab ID	Sample Identification					Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOA	% Moisture		
1	MW4-5-6.5					5/7/05	0800	S	4																				
2	MW4-10-11.5						0804							X													X		
3	MW4-15-16.5						0810																						
4	MW4-20-21.5						0816																						
5	MW4-25-26.5						0820																						
6	MW4-30-31.5						0825																						
7	MW4-35-35.5						0828																						
8	MW4-40-40.5						0834																						
9	MW4-45-45.5						0840		↓					X													X		
10	MW4-50-50.5					↓	0845	↓	5																X				

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by	<i>John Schmitt</i>	FARALLON	5/8/05	20:00	
Received by	<i>Jeff Kaspar</i> JK	FARALLON	5/9/05	8:55 AM	
Relinquished by	<i>Art #4</i>	SPEEDY	5/9/05	11:00	
Received by	<i>M. Y.</i>	OSB	5/9/05	11:00	
Relinquished by	<i>Jeff Kaspar</i> JK	FARALLON	5/9/05	16:30	
Received by	<i>Art #4</i>	SPEEDY	5/9/05	12:30	

Chain of Custody

Company: FARAWON
Project Number: 603-001
Project Name: Four City HAND LAUNDRY
Project Manager: JEFF KASPAR
Sampled by: J SCHMITT

Turnaround Request
(in working days)

(Check One)

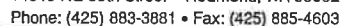
- ☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
☐ _____ (other)

Laboratory Number: 05-059

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOP	% Moisture
11	MW4-55-55.5	5/7/05	0850	S	4																		
12	MW5-5-6.5		1115							X													X
13	MW5-10-11.5		1120							X													X
14	MW5-15-16.5		1120																				
15	MW5-20-21.5		1130																				
16	MW5-25-26.5		1134																				
17	MW5-30-31.5		1140																				
18	MW5-35-35.5		1145																				
19	MW5-40-40.5		1148																				
20	MW5-50-50.5		1154							X													X

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by <u>J Schmitt</u>	<u>FARAWON</u>	<u>5/8/05</u>	<u>20:00</u>	
Received by <u>JL</u>	<u>Farallon</u>	<u>5/9/05</u>	<u>8:55 AM</u>	
Relinquished by <u>Det #4</u>	<u>SPEEDY</u>	<u>5/9/05</u>	<u>12:00</u>	
Received by <u>M. [Signature]</u>	<u>OSB</u>	<u>5/9/05</u>	<u>11:00</u>	
Relinquished by <u>JL</u>	<u>Farallon</u>	<u>5/9/05</u>	<u>10:30</u>	
Received by <u>Det #4</u>	<u>SPEEDY</u>	<u>5/9/05</u>	<u>10:30</u>	
Reviewed by/Date	Reviewed by/Date	Chromatograms with final report		



Page 3 of 5

Environmental Inc. 14548 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • Fax: (425) 885-4603						Turnaround Request (in working days) (Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Standard (7 working days) <input type="checkbox"/> _____ (other)		Laboratory Number: 05 - 059																	
Company: FARALLON Project Number: 063-001 Project Name: FINN CITY HAND LAUNDRY Project Manager: JEFF KASPER Sampled by: J SCHMITT						Requested Analysis																			
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	SOD*	% Moisture		
21	MWS-55-55.5	5/7/05	1215	S	5																X				
22	mws-59.5-60		1225		4																				
23	ASI-60-61		1445		5																	X			
24	ASI-65-65.5		1455		4																	X			
25	ASI-70-70.5		1520		1																	X			
26	ASI-75-75.5		1530		4																				
27	ASI-79-80		1545		4					X														X	
28	MW9-2.5-4	5/8/05	0840		4																				
29	MW9-5-6.5		0844		4			X		X														X	
30	MW9-10-11.5		0848		4			X		X															
		Signature		Company		Date		Time		* Composite soil from these intervals for S.O.D. Test. Looking for heavy oil used to fuel boiler from old UST.															
Relinquished by		Joe Schmitt		FARALLON		5/8/05		20:00																	
Received by		[Signature]		Farallon		5/8/05		8:55 pm																	
Relinquished by		[Signature] JLC		Farallon		5/9/05		10:30																	
Received by		Cut #4		SPEEDY		5/9/05		12:30																	
Relinquished by		Cut #4		"		5/9/05		11:00																	
Received by		[Signature]		OBB		5/9/05		11:00																	
Reviewed by/Date						Reviewed by/Date						Chromatograms with final report []													



**OnSite
Environmental Inc.**
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • Fax: (425) 885-4603

Chain of Custody

Page 4 of 5

Company: FARAWAY
Project Number: 603-001
Project Name: FINN CITY HAND LAUNDRY
Project Manager: JEFF KASPAR
Sampled by: J SCHMITT

Turnaround Request (in working days)	
(Check One)	
<input type="checkbox"/> Same Day	<input type="checkbox"/> 1 Day
<input type="checkbox"/> 2 Day	<input type="checkbox"/> 3 Day
<input checked="" type="checkbox"/> Standard (7 working days)	
<input type="checkbox"/> (other)	

Laboratory Number: **05-059**

Phone: (425) 883-3881 • Fax: (425) 885-4603						Requested Analysis																							
Company: FARAWAY						(Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input checked="" type="checkbox"/> Standard (7 working days) <input type="checkbox"/> _____ (other)																							
Project Number: 603-001																													
Project Name: Finn City Hand Laundry																													
Project Manager: JEFF KASPAR																													
Sampled by: J Schmitt																													
Lab ID	Sample Identification					Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	VPH	EPH	FOC	LSA	% Moisture		
31	mw9-15-16.5					5/8/05	0855	S	4																				
32	mw9-20-21.5						0906		4					X													X		
33	mw9-25-26.5						0910		4																				
34	mw9-30-31.5						0916		3																				
35	mw9-35-35.5						0920		4																				
36	mw9-40-40.5						0926																						
37	mw9-45-45.5						0930							X													X		
38	mw9-50-50.5						0935																						
39	mw9-55-55.5						0946																						
40	mw ID-50-50.5						1250																						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by	<u>Joe Schmitt</u>	<u>FARAWAY</u>	<u>5/8/05</u>	<u>20:00</u>	
Received by	<u>Jeff Kaspar</u>	<u>Faraway</u>	<u>5/9/05</u>	<u>8:35am</u>	
Relinquished by	<u>Jeff Kaspar</u>	<u>Faraway</u>	<u>5/9/05</u>	<u>10:30</u>	
Received by	<u>Art #4</u>	<u>SPEEDY</u>	<u>5/9/05</u>	<u>10:30</u>	
Relinquished by	<u>Art #4</u>	<u>cc</u>	<u>5/9/05</u>	<u>11:00</u>	
Received by					

Chain of Custody

Company: FARALLON
Project Number: 603-001
Project Name: Pine City Hand Laundry
Project Manager: JEFF KASPAR
Sampled by: J. SCHMITT

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
☐ (other) _____

Laboratory Number: **05-059**

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH	NWTPH	NWTPH	Volatile	Halogen	Semivol	PAHs b	PCBs b	Pesticide	Herbicide	Total R	TCLP M	HEM b	VPH	EPH	FO	SO	% Mois	
41	MWID-55-55.5	5/8/05	1254	S	4																			
42	MWID-60-60.5		1300																					
43	MWID-65-65.5		1305																					
44	MWID-70-70.5		1310		↓					X														X
45	B1-2.5-4		1535		5																			
46	B1-5-6.5		1538				X	X																X
47	B1-7.5-9		1540				X	X																↓
48	B1-10-11.5	↓	1545	↓	↓		X	X																↓
	SAS																							

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by	<u>[Signature]</u>	<u>Farallon</u>	<u>5/8/05</u>	<u>20:00</u>	<u>2 - Looking for release of gasoline and BTEX / DRO (diesel)</u>
Received by	<u>[Signature]</u>	<u>Farallon</u>	<u>5/9/05</u>	<u>8:55am</u>	
Relinquished by	<u>[Signature]</u>	<u>Farallon</u>	<u>5/9/05</u>	<u>10:30</u>	
Received by	<u>Act #4</u>	<u>SPEEDY</u>	<u>5/9/05</u>	<u>10:30</u>	
Relinquished by	<u>Act #4</u>	<u>" "</u>	<u>5/9/05</u>	<u>11:00</u>	
Received by	<u>[Signature]</u>	<u>OSB</u>	<u>5/9/05</u>	<u>11:00</u>	
Reviewed by/Date		Reviewed by/Date			Chromatograms with final report <input type="checkbox"/>