
TRANSMITTAL

EPMI**LETTER 8003.44**

To: Mr. Chuck Cline
WDOE
P.O. Box 47775
Olympia, WA. 98504-7775

Phone: 360/407-6267
Fax: 360/407-6305

cc: Philip Roberts - Ryan, Swanson, & Cleveland, PLLC.
Steve Johnson - VIPS
Project File - EPMI

From: Mike Lester
EPMI
2109 S. Eagleson Rd.
Boise, Idaho 83705

Phone: 208/323-0946
Fax: 208/322-9227

Date: February 10, 2000
Project: Yard Birds
Subject: Update

COMMENT

The above referenced project has been conducted voluntarily by Yard Birds Properties Limited Partnership (Yard Birds), initially without technical assistance from the Washington Department of Ecology (WDOE). The sale of the property has prompted the continuation of the project to be conducted with technical review by WDOE. Environmental Project Management, Inc. (EPMI) prepared this summary, using the information known to EPMI at this time, in an effort to provide the WDOE with a brief site history, site conditions, and proposed activities. EPMI has not been involved with the historical activities and is summarizing the events as they have been made known to us. Yard Birds is requesting a technical review and a response (i.e., Working With Letter, Letter of Opinion).

If you have any questions, please feel free to contact me at 208/850-9160.

ATTACHMENTS

- | | | |
|----|--------------|---|
| 1. | Attachment A | Site Location Map |
| 2. | Attachment B | Executive Summary from ATEC Associates, Inc. Phase I and Phase II Environmental Site Assessment |
| 3. | Attachment C | Executive Summary from Enviro, Inc. Phase III |
| 4. | Attachment D | Shannon & Wilson, Inc. December 1996 Report |
| 5. | Attachment E | Figures |
| 6. | Attachment F | The Geo Design Sample Locations |
| 7. | Attachment G | Enzyme Technologies Letter Dated April 16, 1997. |
| 8. | Attachment H | Site Drawings |

Site Location

The site is located in Olympia, Washington near Budds Inlet. The property is bordered to the south by Thurston Ave., east by S. Capitol Way, to the north by A Ave., and to the west by Columbia Way. Attachment A depicts the site location.

Historical Use and Assessments

Attachment B is the Executive Summary from ATEC Associates, Inc. Phase I and II Environmental Site Assessment reports.

ATEC Associates, Inc. conducted a Phase I Environmental Site Assessment in June of 1993 and a Phase II assessment in October of 1993. During the Phase II assessment, gasoline and diesel range hydrocarbons were found at the site. During the first two (2) months of 1994, a Phase III Environmental Site Assessment was conducted by Enviro, Inc. As part of the assessment, one heating oil tank was removed and one gasoline tank was decommissioned in place. The tank was decommissioned in place because it was under a building at the time the work was conducted.

Shannon & Wilson, Inc. collected ground water and soil information in October of 1996. The information collected showed that diesel and gasoline concentrations were present exceeding the MTCA Level A standards. Below is a summary of the conclusions presented in the 1996 Shannon & Wilson, Inc. report (Attachment D).

- ▶ The zone of contamination on the property extended from the southwest corner along Thurston Ave. to the northeast beneath the warehouse, as depicted in their Figure 3.
- ▶ The southwest to northeast trend of the zone was consistent with the inferred ground water flow in the same direction.
- ▶ Based on the results of the ground water sampling, specifically the decreased

WTPH-G/BTEX concentrations in MW-4, it does not appear that gasoline contamination related to the former gasoline UST is a continuing concern.

- ▶ The relatively high levels of diesel and gasoline contamination in the test pits and the relationship of the test pits to the former USTs (up gradient and cross gradient) indicate a contaminant source other than the USTs, possibly one or more of the former bulk fuel storage facilities that existed on and adjacent to the site.
- ▶ Additional site investigation be performed.

Two monitoring wells, MW-9 and MW-10, were installed as part of the additional investigation. One of the wells is located on the south side of Thurston Ave. in the middle of the block and the other well is located on the east side of Columbia Way and south of Thurston Ave. Laboratory analysis of water samples from each well have not detected any hydrocarbon constituents.

Site Activities

1. In April of 1997, Enzyme Technologies mobilized to the site to install and implement an enzyme treatment system. During the installation of their system, they found two underground storage tanks and installed three (3) extraction wells (Attachment D, Shannon and Wilson, Inc. Figure 2). The tanks were discovered west of TP1 and south of TP3. Enzyme Technologies operated their remedial system from approximately April 1997 to July 1998.
2. Teamed with Shannon & Wilson, EPMI was contracted to conduct work at the site. A bioaugmentation system was installed to use UC-40™ bioaugmentation technology. In August of 1998, soil samples were collected to check the site conditions at that time. The results of the sampling event are depicted in Attachment D, Plate 4.
3. Starting in November of 1998, Yard Birds requested EPMI to collect data to assist with delineating the soil and ground water plume. Transglobal Environmental Geosciences Northwest Inc. (TEG) used a strata probe to collect soil and water samples. The samples were analyzed for petroleum hydrocarbon concentrations. The Strata Probe Locations figure in Attachment E depicts the location and the laboratory results of the sampling effort. Strata probe locations YBGP-29, 30, and 31 defined the down gradient northern limits of the soil and ground water plume. Strata probe locations YBGP-7, 11, and 23 helped define the eastern limits of the soil and ground water plume. Strata probe locations YBGP-3, 4, and 13 defined the western limits of the soil and ground water plume. The information collected indicated that a possible hydrocarbon source may exist south or southwest of the property or up gradient of the assume ground water flow direction.

4. VIPS Industries, Inc. (VIPS) authorized the start of construction of a hotel on the property in June of 1999. As part of the construction effort, VIPS authorized the installation of an in-situ bioaugmentation treatment system and a vapor extraction system. The draft installation drawings for the in-situ bioaugmentation system are included in the drawings in Attachment H. Prior to installing the systems, VIPS contracted Geo Design of Portland, Oregon to collect samples using a strata probe in the southeast portion of the property. Geo Design collected samples from twelve (12) locations. The laboratory analysis of the samples show that petroleum constituents were detected at only one location (GP-1). The Geo Design sample locations and laboratory results can be reviewed in Attachment F. EPMI also collected soil samples for analysis (Attachment H).

During site grading activities, George Gill Construction found and removed one underground storage tank. EPMI was not present at the site when the tank was found or removed. The laboratory analysis of the tank contents show that this was a gasoline tank. The approximate location and sampling results of the tank are included in Appendix H.

After George Gill Construction removed the UST, EPMI collected soil and ground water samples from the area where the tank was removed (Appendix H). One soil sample showed the soil contained elevated levels of gasoline range organics. EPMI arranged for the excavation and proper disposal of approximately 120 tons of soil. EPMI will submit a report of the actions related to the UST to Lynn Gooding of the Department of Ecology's Southwest Regional Office and the Toxics Cleanup Program.

Also during site grading activities, piping and one drum were uncovered. The piping appeared to be both water and product lines. EPMI collected eight soil samples from beneath the piping, one sample from the drum contents, and one from beneath the drum. The piping and the drum were removed. The approximate piping and sample locations are included in Attachment H.

5. Using historical data (Attachment G), EPMI attempted to locate the two UST's found by Enzyme Technologies during their system installation. One tank was said to be located near test pit TP1. EPMI used a hand auger to investigate the area approximated to be TP1. While boring in the area, EPMI did not encounter a tank. In addition to the borings, the area was previously excavated to install bioaugmentation piping as well as footings for the building. During these excavations, a tank was not encountered.

A second tank was said to be located near test pit TP3. Excavations required for construction of the building and excavations for installing the bioaugmentation and vapor extraction systems did not encounter a tank in the area.

6. In 1994, a 2,000 gallon tank was decommissioned in place under a building at the site. Historical data indicates that the soil near the tank was contaminated. EPMI located the tank. Then tank was removed and soil samples were collected to assess the area. Approximately 150 tons of contaminated soil were removed and properly disposed.

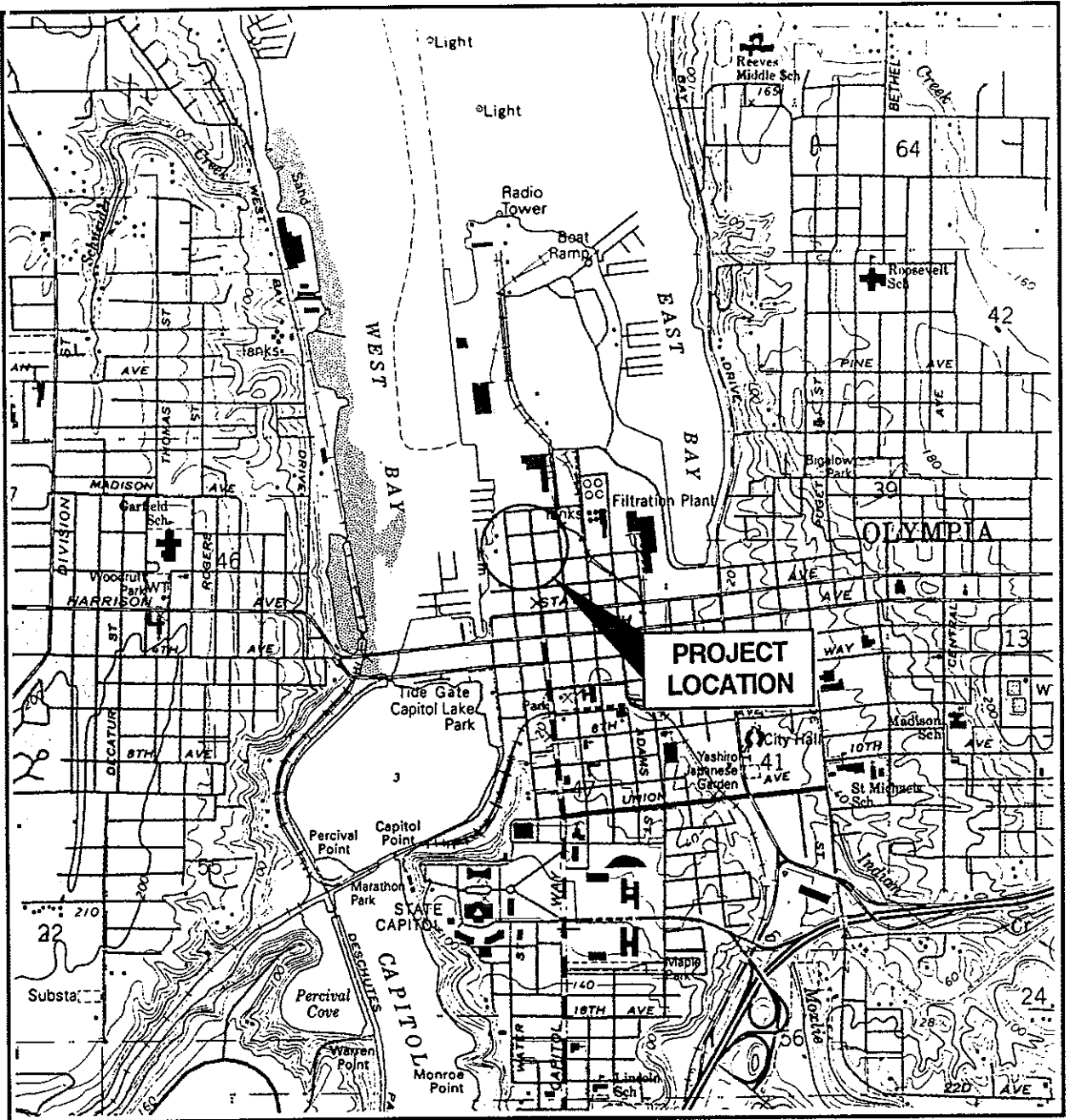
Proposed Site Activities

The sampling conducted by Geo Design indicates that the majority of the remaining contaminated soils are in the parking lot area of the site.

1. EPMI is currently work with Yard Birds to prepare a corrective action plan for continuing the in-situ bioaugmentation to address the remaining contaminated soil.
2. To continue to evaluate the site conditions, 8 monitoring wells are being proposed. The proposed well locations are depicted on the drawing in Attachment H.

This letter has been prepared to summarize the history of the site. This work was not intended to fully evaluate the site conditions. No warranty, expressed or implied, is given. It should be recognized that the definition and evaluation of contaminated soil and groundwater is a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and/or historical conditions applicable to the site. More detailed, focused and/or extensive studies including additional subsurface assessments can tend to reduce the inherent uncertainties associated with evaluation of environmental conditions. Any opinions expressed herein or prior to this writing, are based on the information available to and made known to EPMI, our present understanding of the site conditions, and our judgement in light of such information at the time of the preparation of this writing. We are not responsible for the accuracy of the information provided to EPMI by individuals or entities that were used by us or others in connection with the preparation of this opinion. The sole purpose of this letter is to obtain an opinion from the WDOE technical assistance program and no warranty is either expressed, implied, or made as to the conclusions, advice, and recommendations offered in this letter. This letter is for the sole benefit of and may be relied upon only by Yard Birds Properties Limited Partnership. Neither any extracted or opinion here from or referenced hereto shall be furnished to, quoted to, or relied upon by any other person, firm, or corporation without the expressed written permission of EPMI.

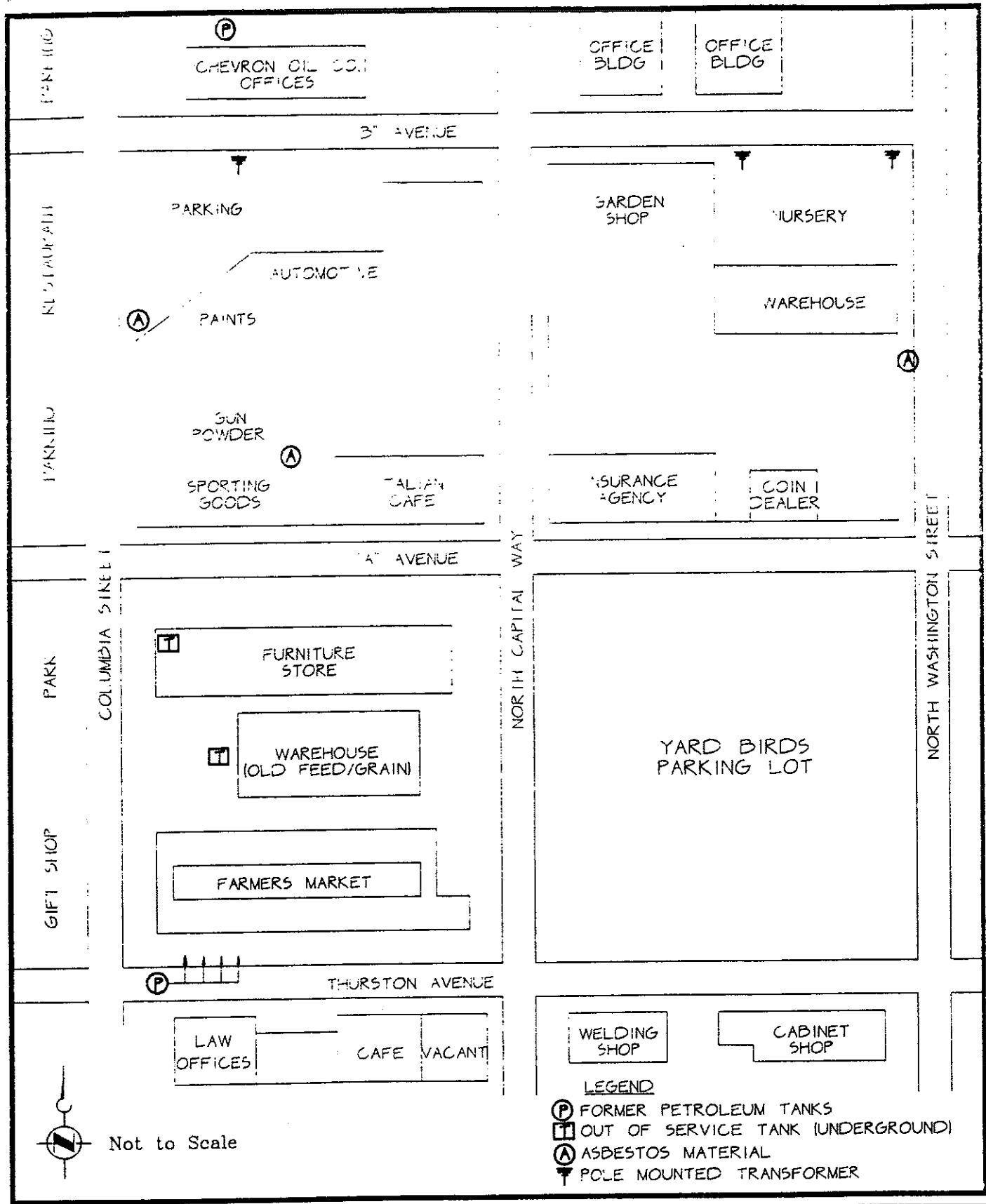
ATTACHMENT A
SITE LOCATION MAP



NOTE

Map adapted from USGS 1:24,000 scale topographic map of Tumwater, WA quadrangle, dated 1959, photorevised 1981.

Yard Birds Property Olympia, Washington	
VICINITY MAP	
April 1997	T-1719-03
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	FIG. 1



PROJECT NAME YARD BIRDS SHOPPING CENTER	
PROJECT No. 93-00059	DATE JUNE 24, 1993
CLIENT RYAN, SWANSON, & CLEVELAND	

ATEC

13037 BELLEVUE-REDMOND RD
SUITE 100
BELLEVUE, WA 98005-2332
(206) 450-0578

FIGURE 2
SITE AND ADJACENT PROPERTIES
Yard Birds Shopping Center
Olympia, Washington

ATTACHMENT B

**EXECUTIVE SUMMARY FROM ATEC ASSOCIATES, INC.
PHASE I & II ENVIRONMENTAL SITE ASSESSMENT**

EXECUTIVE SUMMARY

On June 11, 1993, ATEC Associates, Inc. performed a Phase I Environmental Site Assessment of the Yard Birds Shopping Center complex located in Olympia, Washington. The methods used in the site assessment consisted of interviews and regulatory research of local agencies, reviews of historic aerial photographs of the site vicinity, and a physical evaluation of the subject property and its vicinity.

Based on the site visit, review of aerial photographs back to 1934, and review of city directories, we have identified environmental concerns regarding the one block now occupied by the furniture store and the farmers market. This block is bounded by North Capitol way on the east; by Thurston Avenue on the south; by Columbia Street on the west; and by "B" Avenue on the north. Personnel on-site are aware of two underground storage tanks (USTs) under one end of the structure now occupied by the furniture store and the metal building to the south. One tank was reportedly used to store heating oil and has recently been pumped out. The other tank was reportedly used to store gasoline. It was also reportedly pumped out recently and was apparently partially filled with water. Since groundwater is known to be quite shallow (3 to 5 feet below the surface), the possibility exists that the UST has been perforated by rust.

A second concern has been identified concerning historic use of the southern portion of the same block. City directories for the years 1941 through 1960 list either Associated Oil Company or Tidewater Oil Company at the address of 401 North Capitol Way. This address would be located on the southeast corner of the block in question. Aerial photographs of the subject site's for the years 1934 and 1970 show objects on the north side of Thurston Avenue (the south side of the subject site). These objects appear to be four (4) tall, aboveground tanks arranged in a row parallel with Thurston Avenue.

Two off-site concerns have been identified also. A currently existing gasoline jobber (distributor) facility has been identified approximately 100 feet southwest of the subject sites

southern boundary. Historic aerial photos show this facility back to 1934 at this location. In addition, Chevron Oil Company occupies offices on the corner of Columbia Street and "B" Avenue. Aboveground storage tanks (ASTs) have been identified at this location in the past. An aerial photo dated 1990 does not show ASTs at this location, however, earlier photos show 9 ASTs of various sizes in an area just north of the office complex.

The area in which the subject site is located is built up fill material brought in at the turn of the century. Groundwater is known to be quite shallow with a poorly-defined gradient or flow direction.

Two additional concerns were identified in the Yard Birds Stores. Approximately 30 to 40 feet of thermal pipe wrap was observed near the ceiling of the store on the west side of North Capitol Way. The material has reportedly been tested in the past and determined to contain asbestos. Some of the pipe wrap was reportedly removed in the past. The pipe wrap appears to be in good condition. Additionally, transite board has been observed on several portions of the two store buildings.

Based on this information, the potential for the subject site to have been impacted from on-site and/or off-site sources is high. We therefore recommend the installation of one monitoring well near each of the two known USTs and one each on the west and north sides of the property. In addition, we recommend the installation of at least two monitoring wells on the south boundary of the property (on the north side of Thurston Avenue), for a total of six (6) monitoring wells. Because groundwater is anticipated at 3 to 5 feet, monitoring wells will be very shallow. Samples collected from the wells should be analyzed for hydrocarbon contamination.

We are recommending a good faith asbestos survey to ascertain if the building materials observed do, in fact, contain asbestos. The survey will also estimate the amount of material and its general condition. Since the amount of thermal pipe insulation is relatively small, removal is recommended rather than management. The transite board should be labeled as to its asbestos

content. Transite board should not be removed, cut or drilled without proper precautions.
Removal should be completed by a licensed abatement contractor.

EXECUTIVE SUMMARY

At the request of Mr. Philip M. Roberts, Attorney (and representative for Yard Birds Properties Limited Partnership), ATEC Associates, Inc. performed a Phase II Environmental Site Assessment at two locations at the Yard Birds Shopping Center located at 500 North Capitol Way in Olympia, Washington. Because this site has an extensive history of commercial use and because two underground storage tanks and a gasoline wholesale facility were located there for many years, it was deemed necessary to assess the potential for groundwater and soil contamination from prior activities on the site.

On October 20, 1993, four 15-foot deep groundwater monitor wells were installed at accessible, representative locations near the Farmer's Market, near the former heating oil underground storage tank (UST) located in the shop of the Furniture store at the site, and adjacent to the UST on the west end of the old feed and grain warehouse. The locations were selected considering potential groundwater flow and access by the drilling equipment, and the locations of the UST and previous petroleum marketing activities on the two parcels. Upon well installation, groundwater samples were collected and analyzed for petroleum hydrocarbons.

In conjunction with monitor well installation, four subsurface soil samples were collected at the static groundwater interface level for petroleum hydrocarbon analysis.

Upon encountering evidence of petroleum hydrocarbons in two wells, an additional investigation of groundwater was conducted using a screening technique which allows for collection of a sample without installation of a permanent monitor well. The results of laboratory analysis of the groundwater samples collected using this method indicated that there is significant contamination present on site.

Conclusions made from the Phase II field investigation and laboratory analyses include:

- 1) Groundwater appears to be flowing north on the site rather than to the west as originally expected;
- 2) Free petroleum product was observed in at least one location at the Farmer's Market.
- 3) A plume of groundwater contaminated by predominantly gasoline constituents appears to be flowing north from the Farmer's Market location. The contamination plume has not been delimited and therefore it is not known whether there is petroleum contamination coming from

offsite or how far to the north the contaminant plume extends.

- 4) Monitor Well MW-2 appears to be outside the western limit of groundwater contamination and sample point SP-4 appears to be near the eastern limit of groundwater contamination.
- 5) Petroleum contamination in groundwater, appearing predominantly gasoline in nature, was identified adjacent to the underground storage tank (UST) located below the floor of the shop area of the Treasure Island store.
- 6) Petroleum hydrocarbons were not detected in a groundwater sample collected from monitor well MW-3 located near a UST adjacent to the warehouse building. However, if groundwater flow is to the north, it is still possible that this tank may be leaking.
- 7) The soil appears to be relatively permeable, indicating that the potential for remediation of some of the contamination in place is feasible. This *in situ* approach allows for cost-effective remedial technologies to be employed and continued use of the property during cleanup.

ATEC recommends that the Washington Department of Ecology (Ecology) be formally notified and a meeting arranged to review issues and concerns. Site characterization should be completed with the objective of determining the vertical and lateral extent of contamination. A site characterization report would subsequently be submitted to Ecology as required by the Model Toxics Control Act (MTCA). ATEC also recommends that an Independent Remedial Action under MTCA be initiated upon completion of characterization activities to cleanup the site.

ATTACHMENT C

EXECUTIVE SUMMARY from ENVIROS, INC. PHASE III

EXECUTIVE SUMMARY

Of the four blocks involved in the environmental assessment and property transfer process, three of the blocks (all except the Farmer's Market block) have achieved substantial closure or resolution of environmental concerns. Remaining environmental concerns on the Farmer's Market have been addressed by thorough site characterization and implementation of preliminary remediation measures directed at source control. Completed remediation measures include decommissioning of the two on-site USTs, removal of approximately 15 tons of diesel-contaminated soil and pump-out of diesel product in a well in the southwest corner of the Farmer's Market.

The results from the soil testing indicated that contamination in the Farmer's Market block was less widespread than initially suspected based on non-detectable contaminant concentrations for soil samples collected by EnviroS. It was also discovered that contamination trends may have been obscured by excavation and site grading activities conducted approximately 10 years ago by the City of Olympia in preparation of construction of the Farmer's Market.

Groundwater assessment results indicated that water flows from the west and south toward the northeast and that a very steep groundwater gradient exists at the southwestern end of the Farmer's Market. Groundwater transport may be quite rapid in this area based on the steep gradient and the sandy soil/fill conditions on the site. Changes in groundwater elevations with respect to tides monitored over an 8 hour period appeared minimal even though Puget Sound (Budd Inlet) is located approximately 200 feet west of the Farmer's Market.

Floating petroleum hydrocarbon product was observed in a well within the Farmer's Market and diesel contaminant concentrations were above Ecology cleanup levels. Gasoline contamination above Ecology cleanup levels was also observed in the well adjacent to the gasoline UST of the Treasure Chest and in one down-gradient well.

The results of sampling on the north end of the Farmer's Market block indicated that the gasoline contamination was likely attributable to the former operation of the gasoline UST in the Treasure Chest building. The contamination in this area of the property also appeared to be limited to gasoline contaminants since no heavy oil or diesel contamination was detected in the groundwater. Soil samples collected immediately adjacent to the tank had gasoline contaminant concentrations well above Ecology soil cleanup levels. The total volume of remaining contaminated soil in this area is estimated to be 230 cubic yards and appears to be localized around the groundwater table boundary.

The results of sampling on the south end of the Farmer's Market block indicated that diesel product contamination might be attributable to former operation of the heating fuel (diesel) UST adjacent to the Warehouse building, and/or historical operation of a bulk fuel transfer/storage facility on the south end of the block. Contamination on the west end of the Farmer's Market area appeared to be limited to diesel contaminants since no gasoline constituents were detected in the groundwater. Contamination on the east end of the Farmer's Market area near North Capital Way appeared to be a mixture of diesel and gasoline.

The total volume of remaining contaminated soil in the Farmer's Market area is not accurately known but may range from 405 to 810 cubic yards depending on the actual thickness of the contamination which appears to be localized around the groundwater table boundary. Based on available field data and observations, the thickness of contaminated soil in the Farmer's Market appears to be approximately 2 feet and the lateral extent may cover an area of approximately 11,000 square feet. There also appears to be a substantial overburden of non-contaminated soils resting above the contamination zone which may be related to historical site grading activities.

In addition to tank decommissioning activities, the well in the Farmer's Market that contained floating diesel product was pumped down several times during the course of field activities to remove product. Product and oily water was disposed by vacuum truck. The product was observed to recharge into the well on collection of subsequent groundwater measurements. The estimated volume of product is very approximate and may range from 3100 to 4600 gallons assuming a 2 to 3 -inch product layer, an affected area of 110 by 75 feet and a soil porosity of 0.30 (30%).

ATTACHMENT D

SHANNON & WILSON, INC. DECEMBER 1996 REPORT

T-1719-02

***Results of Test Pit Explorations
and Monitoring Well Sampling at
Yard Birds Property
Olympia, Washington***

December 1996

***Ryan Swanson & Cleveland
1201 Third Avenue Suite 3400
Seattle, Washington 98101-3034***



SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

400 N. 34th St. ▪ Suite 100
P.O. Box 300303
Seattle, Washington 98103
206 ▪ 632 ▪ 8020

December 30, 1996

Mr. Robert W. Bryan, Esq.
Ryan Swanson & Cleveland
1201 Third Avenue, Suite 3400
Seattle, Washington 98101-3034

**RE: RESULTS OF TEST PIT EXPLORATIONS AND MONITORING WELL
SAMPLING AT YARD BIRDS PROPERTY, OLYMPIA, WASHINGTON**

Dear Mr. Bryan:

This letter provides the results of the test pit explorations and monitoring well sampling performed at the Yard Birds Property located in Olympia, Washington (Figure 1). The original scope of services included excavation of six test pits with the intent of evaluating diesel and gasoline contamination in the soil and groundwater in the vicinity of the former Farmer's Market building. To further evaluate the extent of contamination, four additional test pits were excavated. Sampling of the eight existing groundwater monitoring wells was also added to the scope of services; however, MW-3 could not be located and was not sampled.

BACKGROUND

Phase I and Phase II environmental site assessments (ESAs) were previously performed by ATEC Associates (ATEC) and Enviros, Inc. (Enviros). The Phase I ESA was not available to Shannon & Wilson at the time this report was prepared. Therefore, the background summary is taken from the Enviros ESA report¹ and specific details may require corroboration.

Two underground storage tanks (USTs) (one 500-gallon heating oil tank and one 2,500-gallon gasoline tank) formerly existed on the Yard Birds property at the locations shown on

¹ *Environmental Site Assessment of the Yard Birds Property, Olympia, Washington, Enviros, Inc., May 27, 1994.*

Figure 2. The heating oil UST was removed and the gasoline UST was closed-in-place in March 1994. In addition to the USTs, a bulk fuel storage facility was reported to be located at the south end of the Farmer's Market block (the block bounded by North Columbia Street, Thurston Avenue, North Capitol Way, and "A" Avenue). Two other bulk fuel storage facilities were reported to be located adjacent to the site: one on the block southwest of the subject block (Unocal) and one on the block immediately north of B Avenue.

Both ATEC and Enviros conducted site investigation activities related to petroleum hydrocarbon contamination of the soil and groundwater at the site. Gasoline, diesel, and oil-range petroleum hydrocarbons were reported to be present in both the soil and groundwater. Shannon & Wilson's review of the existing data indicates that the oil reported in the samples was a result of diesel-range free product, and that oil-range petroleum hydrocarbons are not of concern. Contaminant sources were identified by Enviros as the former heating oil UST, former gasoline UST, and the former bulk fuel storage facility located on the site. Off-site sources, including the former bulk facilities, may also be contaminant sources.

TEST PIT EXPLORATIONS

On October 11, 1996, ten test pits were excavated at the site. A summary of the conditions encountered in the test pits and sample information are contained in Table 1. Test pit locations are shown on Figure 3. The soil encountered in the test pits was primarily gray, fine to medium sand containing shells and gravel. Several of the test pits also had a layer of gray sandy silt at a depth of approximately five to six feet below the existing grade.

Ten soil and 9 groundwater samples were collected from the test pits (water was not collected from test pit four [TP-4] because of caving). The 19 soil and groundwater samples were submitted to TEG, Inc., for laboratory analysis of diesel- and gasoline-range petroleum hydrocarbons by methods Washington Total Petroleum Hydrocarbons as Diesel (WTPH-D), and as Gasoline (WTPH-G) with benzene, toluene, ethylbenzene and xylene (BTEX) distinction. The soil and groundwater results are summarized in Table 2.

Mr. Robert W. Bryan, Esq.
Ryan Swanson & Cleveland
December 30, 1996
Page 3

SWANSON & WILSON, INC.

Diesel and gasoline were detected at concentrations exceeding the Model Toxics Control Act (MTCA) Method A cleanup levels in the soil and groundwater in various test pits from the south side of the site, along Thurston Avenue (TP-6 and TP-7), and across the site, to the northeast (TP-1, TP-4, TP-3 and TP-10), as illustrated on Figure 3.

MONITORING WELL SAMPLING

On October 31, 1996, groundwater samples were collected from seven of the existing groundwater monitoring wells. The well locations are shown on Figure 2. The samples were submitted to TEG for WTPH-D and WTPH-G/BTEX analyses. During sampling, a shallow layer of product (approximately 0.18 inch) was measured on top of the groundwater in MW-1. The sample from this well was collected below the product layer. The existing monitoring wells have been periodically monitored since November 1993, with the most recent previous sampling occurring in August 1995. The historical sample results are summarized in Table 3.

Detected concentrations of WTPH-D, WTPH-G, ethylbenzene, and toluene in MW-1 have all decreased since the last sampling event; benzene and toluene showed minor increases. Concentrations in MW-2, MW-7, and MW-8 continued to be non-detectable. WTPH-G and BTEX concentrations in MW-4 decreased below MTCA cleanup levels (WTPH-D concentrations continue to be below detection levels). MW-5 showed slight increases in BTEX compounds, although no concentrations yet exceed cleanup levels. Detected concentrations in MW-6 were relatively unchanged, with benzene continuing to exceed the cleanup level.

Depths to groundwater were measured in each monitoring well prior to sampling, and groundwater elevations were determined. Elevation contours are depicted on Figure 2. Groundwater flow is indicated to the northeast and northwest over a two-block area, with an apparent gradient change occurring on the east side of the subject block. The direction of flow across the area of concern is clearly northeast.

T-1719-02

CONCLUSIONS

The data from the test pits and monitoring wells indicates a zone of contamination extending across the site beginning at the southwest corner along Thurston Avenue and extending northeast beneath the warehouse, as depicted on Figure 3. The southwest to northeast trend of this zone is consistent with the inferred groundwater flow in the same direction. The extent of this zone to the northeast was not defined during the current investigation. The existence of contamination along the upgradient side of the site (Thurston Avenue) indicates a potential off-site contaminant source. In addition, there are a sewer line and a catch drain line running east to west across the identified zone of contamination that may act as conduits for on- or off-site migration.

Based on the results of the groundwater sampling, specifically the decreased WTPH-G/BTEX concentrations in MW-4, it does not appear that gasoline contamination related to the former gasoline UST is a continuing concern. The relatively high levels of diesel and gasoline contamination in the test pits and the relationship of the test pits to the former USTs (upgradient and crossgradient) indicate a contaminant source other than the USTs, possibly one or more of the former bulk fuel storage facilities that existed on and adjacent to the site.

We recommend that additional site investigation be performed prior to proceeding with further cleanup activities. Specifically, monitoring wells should be installed southwest of the site to evaluate levels of contaminants that may be migrating on site from the former Unocal bulk fuel storage facility, and on the northeast portion of the site to evaluate the extent of contaminant migration across the site. The information gained from these wells will help us design a remediation plan that takes into consideration the impacts from potential continuing on-site contaminant migration and the effects of natural attenuation that may be occurring as the contamination migrates downgradient.

CLOSURE

The data presented in this report is based on limited research at the site and should be considered representative at the time of our observations. We performed this work within

Mr. Robert W. Bryan, Esq.
Ryan Swanson & Cleveland
December 30, 1996
Page 5

SHANNON & WILSON, INC.

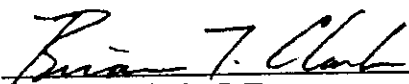
our best judgment to adequately describe site conditions. Changes in the conditions of the property could occur with time from both natural processes and human activities. In addition, changes in governmental codes, regulations, or law may occur. Because of such changes beyond our control, our observations and recommendations applicable to this facility may need to be revised wholly or in part.

This report was prepared for the exclusive use of Ryan Swanson & Cleveland, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. Shannon & Wilson has prepared the attached "Important Information About Your Environmental Report" (Appendix C) to assist you and others in understanding the use and limitations of our reports.

Thank you for the opportunity to assist you with this project. Please contact me at (206) 633-6889 if you have any questions.

Sincerely,

SHANNON & WILSON, INC.



Brian L. Clark, P.E.
Senior Environmental Engineer

BLC:JFZ/blc

Enclosures: Table 1 - Summary Information for Test Pits Excavated 10/11/96
Table 2 - Sample Results From Test Pits Excavated 10/11/96
Table 3 - Historical Groundwater Sample Results
Figure 1 - Vicinity Map
Figure 2 - Groundwater Contours and Sample Results
Figure 3 - Test Pit Exploration Plan
Appendix A - Test Pit Logs
Appendix B - Analytical Laboratory Reports
Appendix C - Important Information About Your Environmental Report

T1719-02.LTR/T1719-1kd/eet

T-1719-02

**TABLE 1 - SUMMARY INFORMATION FOR TEST PITS EXCAVATED 10/11/96
YARD BIRDS PROPERTY, OLYMPIA, WASHINGTON**

Test Pit	Total Depth Below Grade (ft)	Upper Soil PID (ppm)	Lower Soil PID (ppm)	Soil Sample		Water Sample		Notes
				Number	Depth (ft)	Number	Depth (ft)	
1	8.5	45	105	171901	7	171902	8	Brown petroleum stained sand from 6 to 8 feet. Heavy black and brown product on water surface.
2	8	0	0	171903	6.5	171904	7	No HC odor from soils. Very light sheen on water.
3	8.5	130	611	171905	8	171906	8	Gray and brown staining from 6 to 7.5 feet. Heavy black staining from 7.5' to water. Brown product on water surface.
4	8.5	350	850	171907	7.5	-	-	Very strong gas like and sulfur odor from soil. Test pit sloughed so no water collected.
5	8	0	0	171908	7	171909	7.5	No HC odor from soils. No sheen on water.
6	8	0	125	171910	6.5	171911	7	HC odor from 4.5' down. Light product film on water.
7	8	32	320	171912	6	171913	7	HC odor in soil, increasing with depth. Light product film on water.
8	8	0	0	171914	7	171915	8	No HC odor from soils. No sheen on water.
9	8	0	0	171916	7	171917	8	No HC odor from soils. No sheen on water.
10	11	115	1075	171918	9	171919	9.5	Very strong gas like odor from soil. Heavy sheen on water.

HC = Hydrocarbon

Upper soil = screening of soil excavated from test pit.

Lower soil = screening within test pit after excavation to final depth.

TABLE 2 - SAMPLE RESULTS FROM TEST PITS EXCAVATED 10/11/96
YARD BIRDS PROPERTY, OLYMPIA, WASHINGTON

Soil Samples								
Sample Number	Test Pit	Approx. Depth Below Grade (ft.)	WTPH-D (ppm)	WTPH-G (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
171901	1	7.0	13,300	6,860	47	22	118	128
171903	2	6.5	< 20	< 10	< 0.05	< 0.05	< 0.05	< 0.05
171905	3	8.0	7,220	1,250	< 0.05	< 0.05	< 0.05	< 0.05
171907	4	7.5	84	< 10	< 0.05	< 0.05	< 0.05	< 0.05
171908	5	7.0	< 20	< 10	< 0.05	< 0.05	< 0.05	< 0.05
171910	6	6.5	< 20	< 10	< 0.05	< 0.05	< 0.05	< 0.05
171912	7	6.0	129	< 10	< 0.05	< 0.05	< 0.05	< 0.05
171914	8	7.0	< 20	< 10	< 0.05	< 0.05	< 0.05	< 0.05
171916	9	7.0	< 20	< 10	< 0.05	0.11	< 0.05	< 0.05
171918	10	9.0	4,440	244	< 0.05	< 0.05	1.95	21.6
MTCA Method A Cleanup Level ^a			200	100	0.5	40.0	20.0	20.0
Groundwater Samples								
Sample Number	Test Pit	Approx. Depth Below Grade (ft.)	WTPH-D (ppb)	WTPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
171902	1	8.0	234,000	4,700	1,120	200	6,080	1,060
171904	2	7.0	< 200	< 200	< 1.0	< 1.0	< 1.0	< 1.0
171906	3	8.0	7,300	9,800	280	< 1.0	150	71
171909	5	7.5	< 200	< 200	< 1.0	< 1.0	< 1.0	< 1.0
171911	6	7.0	5,180	< 200	< 1.0	< 1.0	< 1.0	< 1.0
171913	7	7.0	28,300	7,300	19	10	258	3.7
171915	8	8.0	< 200	< 200	< 1.0	< 1.0	< 1.0	< 1.0
171917	9	8.0	< 200	< 200	< 1.0	< 1.0	< 1.0	< 1.0
171919	10	9.5	26,000	< 200	< 1.0	< 1.0	< 1.0	< 1.0
MTCA Method A Cleanup Level ^a			1,000	1,000	5.0	40.0	30.0	20.0

^a Model Toxics Control Act Method A Residential Standards
Boldface text indicates concentration exceeding cleanup level.

ppm = parts per million

ppb = parts per billion

**TABLE 3 - HISTORICAL GROUNDWATER SAMPLE RESULTS
YARDBIRDS PROPERTY, OLYMPIA, WASHINGTON**

Sampling Date	Sample Number	Diesel ^a (ppb)	Gas ^a (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	DTW (feet) ^b	GW Elev (feet)
MW-1								MW-1	
11/4/93		18,000	1,100	6.4	< 0.5	3	< 1.0		
2/7/94		280,000	< 300	< 1.0	< 1.0	< 1.0	< 2.0		
7/6/94		1,900,000	180,000	< 1.0	< 1.0	< 1.0	< 2.0	7.06	0.26
10/6/94		10,000	3,200	17	2.2	5	12	7.18	0.14
1/6/95		730,000	12,000	15	3.3	15	35	6.50	0.82
4/20/95		21,000	1,700	12	4	3	7	6.33	0.99
8/15/95		200,000	15,000	8.5	< 1.0	19	51		
10/31/96	171920	54,000	< 200	13	2.8	< 1.0	< 1.0	6.06	1.26
MW-2								MW-2	
11/4/93		< 250	< 50	< 0.5	< 0.5	< 0.5	< 1.0		
2/7/94		900	< 300	< 1.0	< 1.0	< 1.0	2.2		
7/6/94		710	< 300	< 1.0	< 1.0	< 1.0	< 2.0	6.30	0.80
10/6/94		< 500	< 300	< 1.0	< 1.0	< 1.0	< 2.0	6.44	0.66
1/6/95		< 500	< 300	< 1.0	< 1.0	< 1.0	< 2.0	5.29	1.81
4/20/95		< 500	< 100	< 1.0	< 1.0	< 1.0	< 2.0	5.79	1.31
8/15/95		< 500	< 100	< 1.0	< 1.0	< 1.0	< 2.0		
10/31/96	171921	< 200	< 200	< 1.0	< 1.0	< 1.0	< 1.0	5.78	1.32
MW-3								MW-3	
11/4/93		< 250	< 50	< 0.5	< 0.5	< 0.5	< 1.0		
2/7/94		< 500	< 300	< 1.0	< 1.0	< 1.0	2.2		
10/31/96		Well could not be located							
MW-4								MW-4	
11/4/93		2,100	170	1.5	< 0.5	3.3	25		
2/7/94		< 500	6,200	140	210	530	1,440		
7/6/94		1,400	2,200	57	2.4	130	285	6.30	0.69
10/6/94		< 500	< 300	26	< 1.0	5.6	12	6.41	0.58
1/6/95		< 500	560	2.9	< 1.0	6.8	86.7	5.31	1.68
4/20/95		< 500	220	26	< 1.0	8.0	14	5.61	1.38
8/15/95		< 500	1,700	40	< 1.0	220	69.1		
10/31/96	171923	< 200	< 200	1.5	12.0	< 1.0	< 1.0	5.76	1.23
MW-5								MW-5	
2/7/94		890	< 300	11	1.3	1.6	3.0		
7/6/94		1,300	< 300	2.1	< 1.0	2.4	2.5	6.95	0.40
10/6/94		77	< 300	12	< 1.0	< 1.0	2.2	6.99	0.36
1/6/95		< 500	< 300	15	< 1.0	1.1	1.3	6.34	1.01
4/20/95		< 500	200	9.4	< 1.0	1.4	2.0	6.51	0.84
8/15/95		< 500	290	< 1.0	< 1.0	< 1.0	< 1.0		
10/31/96	171924	< 200	< 200	3.6	3.2	< 1.0	3.2	6.54	0.81

**TABLE 3 - HISTORICAL GROUNDWATER SAMPLE RESULTS
YARDBIRDS PROPERTY, OLYMPIA, WASHINGTON**

Sampling Date	Sample Number	Diesel ^a (ppb)	Gas ^a (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	DTW (feet) ^b	GW Elev (feet)
MW-6								MW-6	
2/7/94		860	720	51	3.2	3.1	9.3		
7/6/94		1,100	800	41	8.5	3.3	5.8	6.89	0.55
10/6/94		59	490	15	< 1.0	< 1.0	4.8	6.95	0.49
1/6/95		< 500	900	53	2.1	2.7	4.5	6.28	1.16
4/20/95		660	1,100	9.4	< 1.0	1.4	2.0	6.46	0.98
8/15/95		700	< 100	61	2.9	4.9	7.4		
10/31/96	171925	< 200	862	50	7.1	< 1.0	8.0	6.43	1.01
MW-7								MW-7	
2/7/94		< 500	< 300	< 1.0	1.5	2.3	14.8		
7/6/94		< 500	< 300	< 1.0	< 1.0	< 1.0	< 2.0	7.24	0.24
10/6/94		< 500	< 300	< 1.0	< 1.0	< 1.0	< 2.0	7.34	0.14
1/6/95		< 500	< 300	< 1.0	< 1.0	< 1.0	< 2.0	6.55	0.93
4/20/95		< 500	< 300	7.4	< 1.0	< 1.0	< 2.0	6.78	0.7
8/15/95		< 500	< 100	< 1.0	< 1.0	< 1.0	< 1.0		
10/31/96	171926	< 200	< 200	< 1.0	< 1.0	< 1.0	< 1.0	6.85	0.63
MW-8								MW-8	
2/7/94		< 500	< 300	< 1.0	< 1.0	1.0	3.5		
10/31/96	171927	< 200	< 200	< 1.0	< 1.0	< 1.0	< 1.0	5.08	1.64
Cleanup Levels ^c		1,000	1,000	5.0	40.0	30.0	20.0		

NOTES:

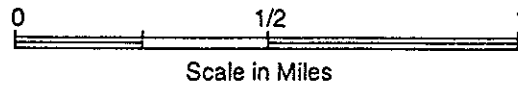
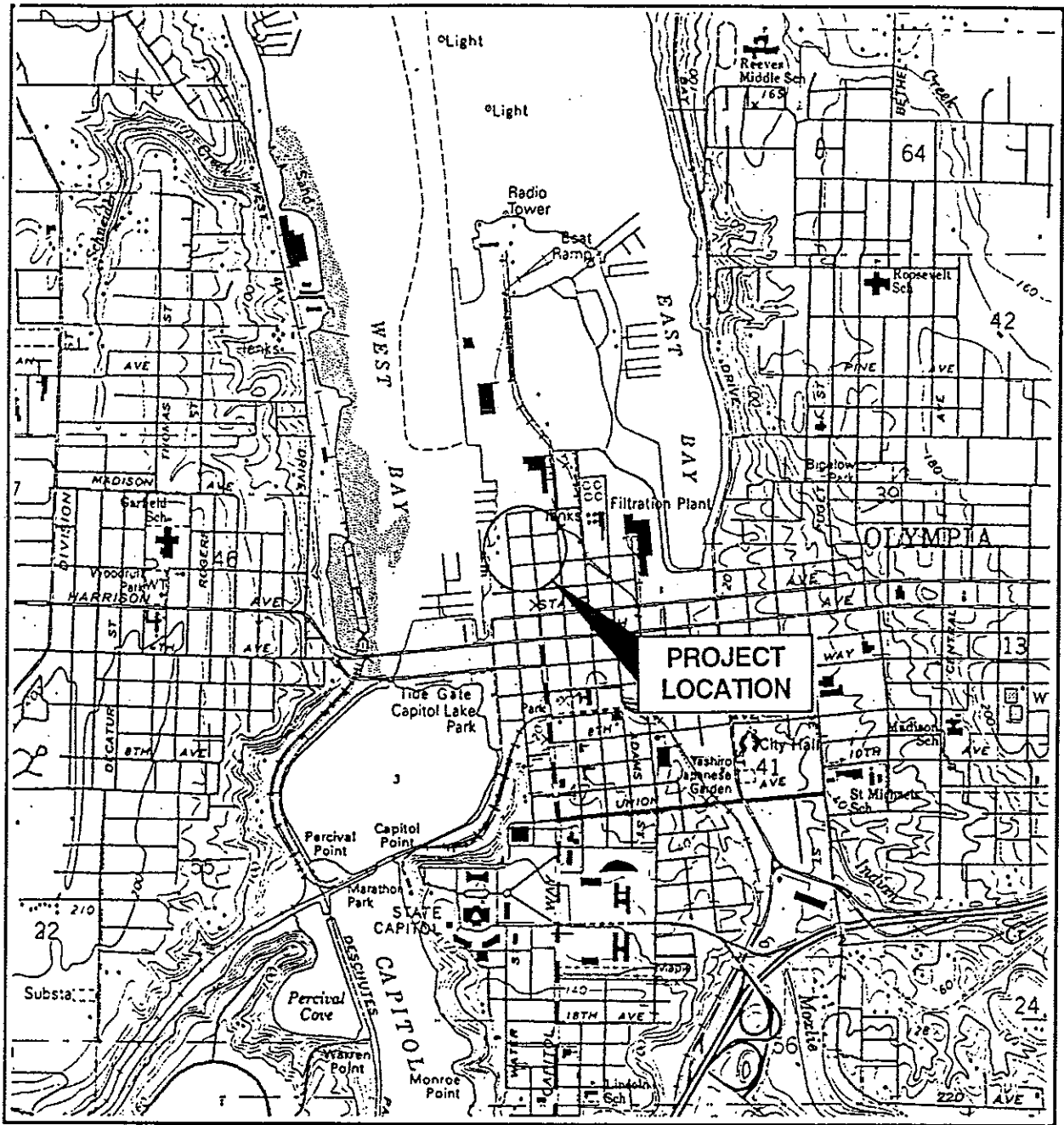
^a Groundwater samples analyzed by methods WTPH-D and WTPH-G/BTEX.

^b Depth to water measured from top of casing.

^c Model Toxics Control Act Method A

< = Less than the indicated method reporting limit (MRL) or practical quantitation limit (PQL).

Boldface text denotes concentration exceeding the cleanup level.



NOTE

Map adapted from USGS 1:24,000 scale topographic map of Tumwater, WA quadrangle, dated 1959, photorevised 1981.

Yard Birds Property
Olympia, Washington

VICINITY MAP

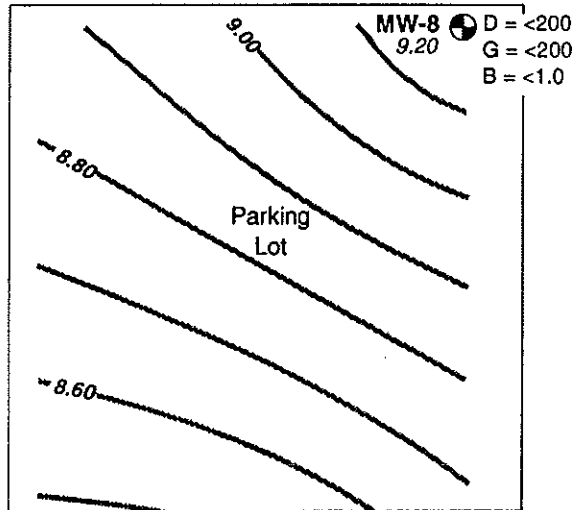
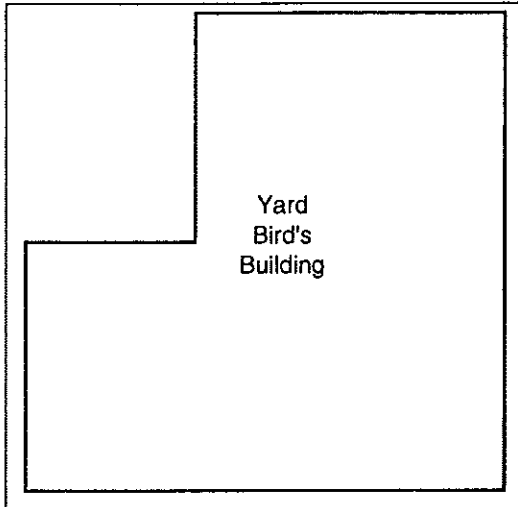
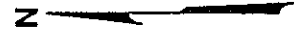
October 1996

T-1719-02

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

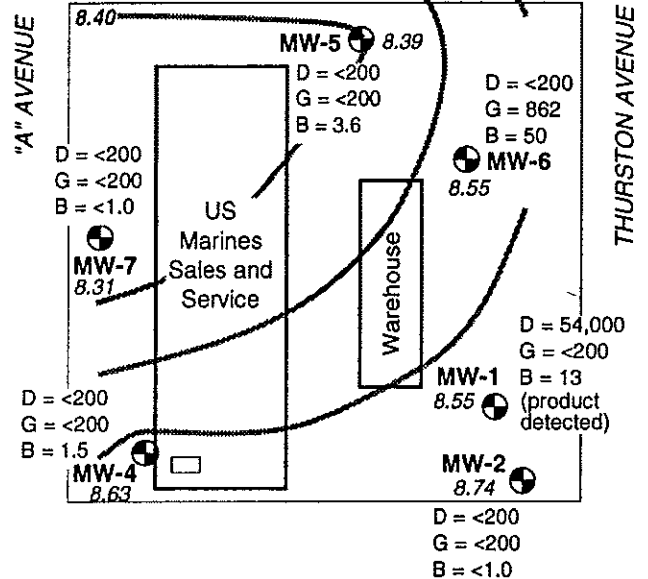
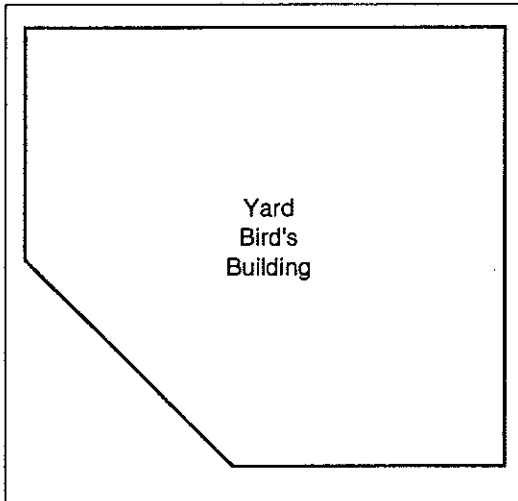
FIG. 1

NORTH WASHINGTON STREET



NORTH CAPITAL WAY

"B" AVENUE



THURSTON AVENUE

NORTH COLUMBIA STREET

LEGEND

— 8.50 — Groundwater Elevation Contour

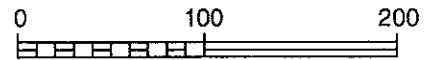
MW-1 ● Monitoring Well Designation and Approximate Location with Groundwater Elevation

D = Diesel-range Petroleum Hydrocarbons
G = Gasoline-range Petroleum Hydrocarbons
B = Benzene

Concentrations shown in parts per billion (ppb)

NOTES

- MW-3 could not be located and therefore was not sampled.
- Groundwater elevations are relative to arbitrary site datum.



Scale in Feet
Contour Interval = 0.10 Feet

Yard Birds Property - Farmers Market
Olympia, Washington

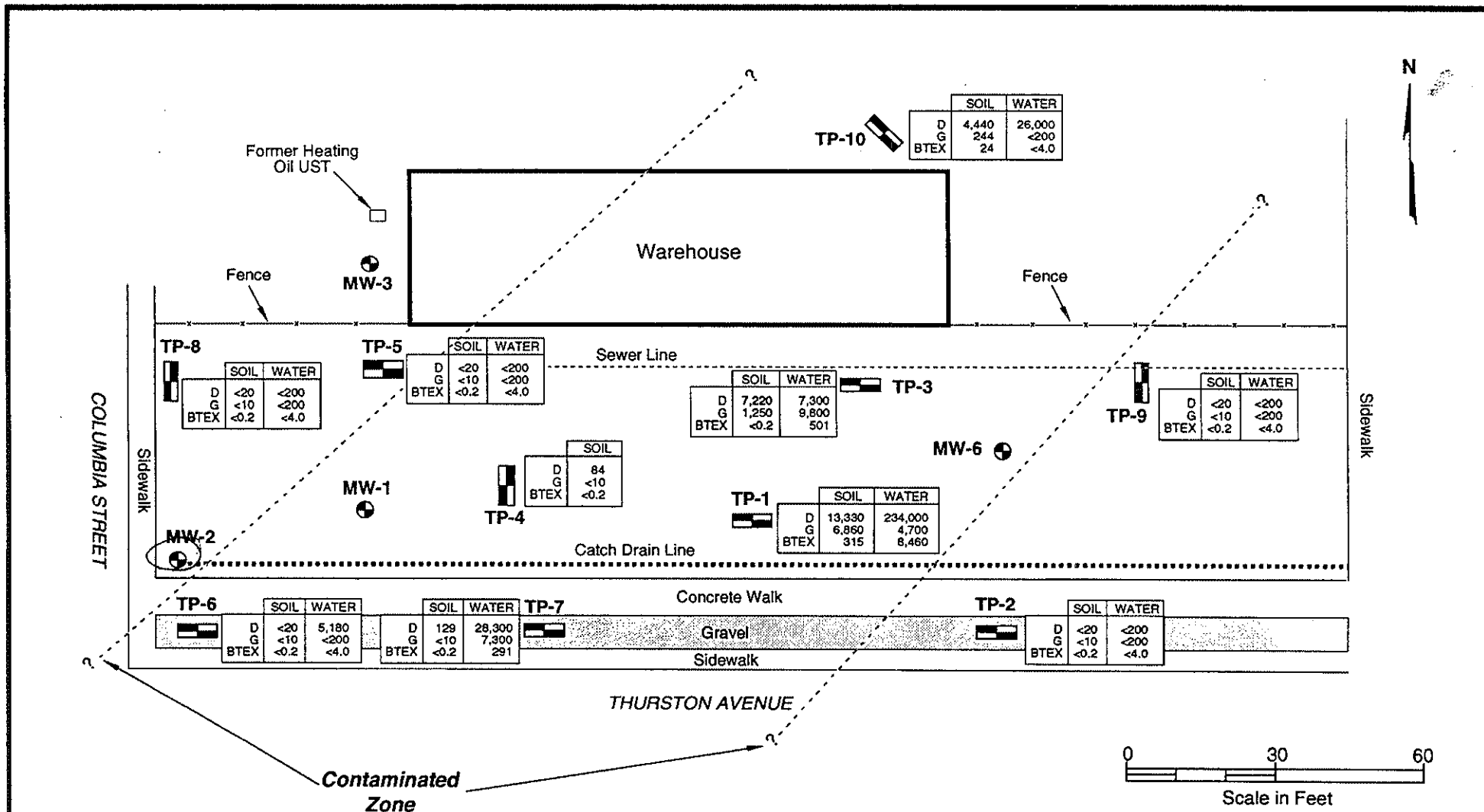
**GROUNDWATER CONTOURS
AND SAMPLE RESULTS**

October 1996

T-1719-02

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 2



LEGEND

MW-1 Monitoring Well Designation and Approximate Location

TP-1 Test Pit Designation and Approximate Location

D = Diesel-range Concentration
 G = Gasoline-range Concentration
 BTEX = Total Benzene, Toluene, Ethylbenzene, and Xylene Concentration
 Soil Results are ppm
 Water Results are ppb

Yard Birds Property - Farmers Market Olympia, Washington	
TEST PIT EXPLORATION PLAN	
October 1996	T-1719-02
SHANNON & WILSON, INC. Geotechnical and Environmental Consultants	FIG. 3

FIG. 3

APPENDIX A
TEST PIT LOGS

FIELD LOG OF TEST PIT

JOB NO. T-1719-02

TEST PIT TP-1

PROJECT YARD BIRDS

DATE 10/11/96

LOCATION YARD BIRDS, OLYMPIA, WA

LOGGED BY TF

SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS	GROUND WATER	SAMPLES	DEPTH IN FEET	SKETCH OF <u>N</u> PIT SIDE		SURFACE ELEVATION _____	
				HORIZONTAL DISTANCE IN FEET			
Gray beach sands w/ organic debris (wood & shells)			2	2	4	6	8
			4				
			6				
Brown HC stained sand		01	7				
Black/brown HC product on H ₂ O		02	8				
			10				

Av. in TP
45 ppm in PID

fine to med. SAND
w/ Beach organics

HC
odor

Brown stained sand

01 (SL)

02 (GW)



SHANNON & WILSON, INC
Geotechnical Consultants

FIELD LOG OF TEST PIT

JOB NO. T-1719-02

TEST PIT TP-2

PROJECT YARD BIRDS
DATE 10/11/96 LOCATION OLYMPIA, WA
LOGGED BY TF SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS	GROUND WATER	SAMPLES	DEPTH IN FEET	SKETCH OF <u>N</u> PIT SIDE		SURFACE ELEVATION _____	
				HORIZONTAL DISTANCE IN FEET			
				2	4	6	8
<p>Gray Beach sand w/ shells + wood</p> <hr/> <p>Brown & Black beach sands + lumber</p> <hr/> <p>Slight sheen on H₂O <u>no</u> HC odor</p>		03 04	2 4 6 8 10				

FIELD LOG OF TEST PIT

JOB NO. T-1719-02

TEST PIT TP3

PROJECT YARD BIRDS
DATE 10/11/96 LOCATION Olympia, WA
LOGGED BY TE SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS

GROUND WATER

SAMPLES

DEPTH IN FEET

SKETCH OF S PIT SIDE SURFACE ELEVATION _____

HORIZONTAL DISTANCE IN FEET

2 4 6 8

Gravels + silt (grade fill)

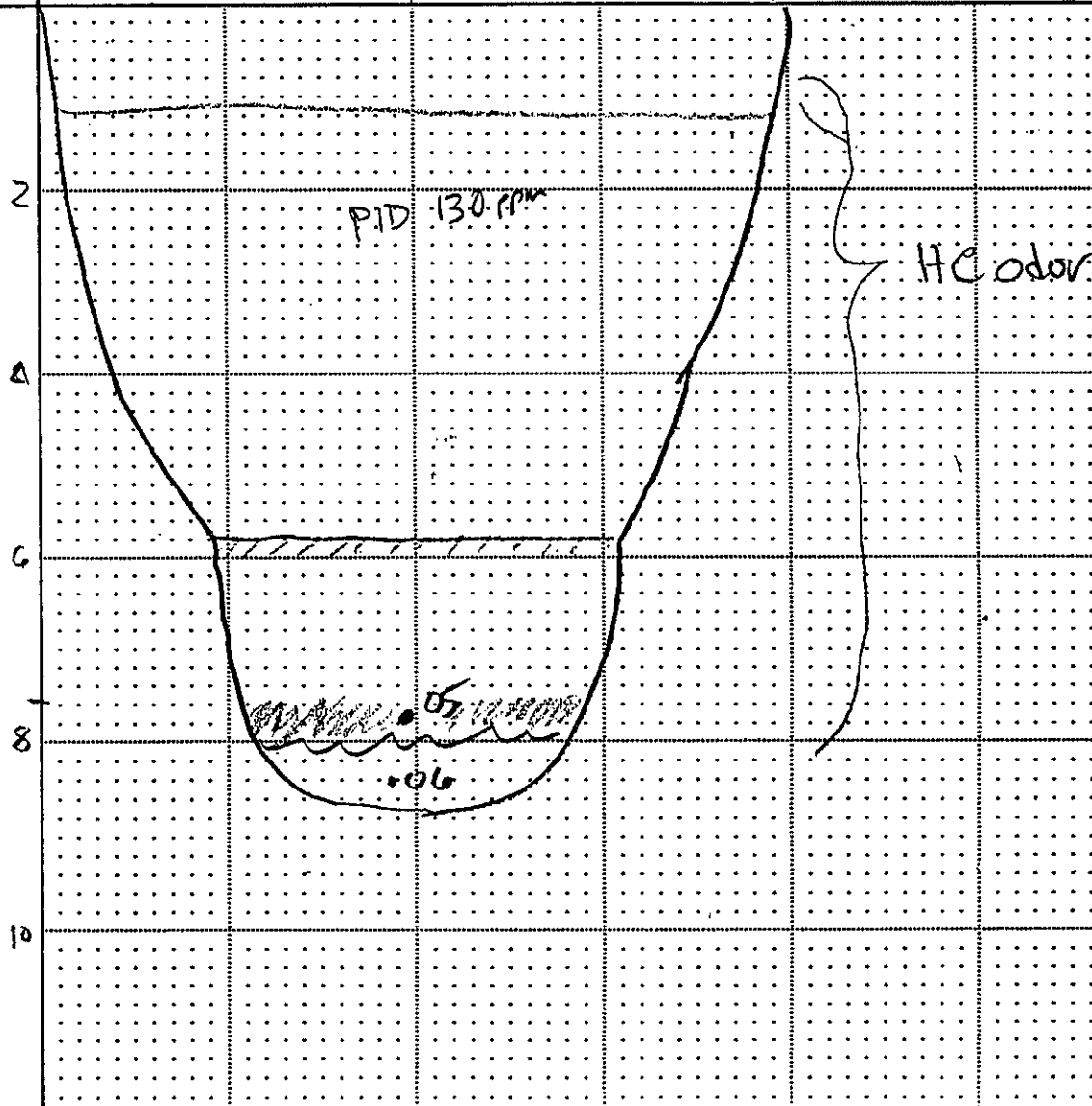
Gray Beach sand w/ shells + gravel

Stained gray & brown (black) beach sands Heavy H₂O odor

@ 7.5'

Brown production H₂O

05
06



FIELD LOG OF TEST PIT

JOB NO. T-1719-02

TEST PIT TP-4

PROJECT YARD BIRDS

DATE 10/11/96

LOCATION OLYMPIA, WA

LOGGED BY TF

SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS

GROUND WATER

SAMPLES

DEPTH IN FEET

SKETCH OF W

PIT SIDE


SURFACE ELEVATION _____

HORIZONTAL DISTANCE IN FEET

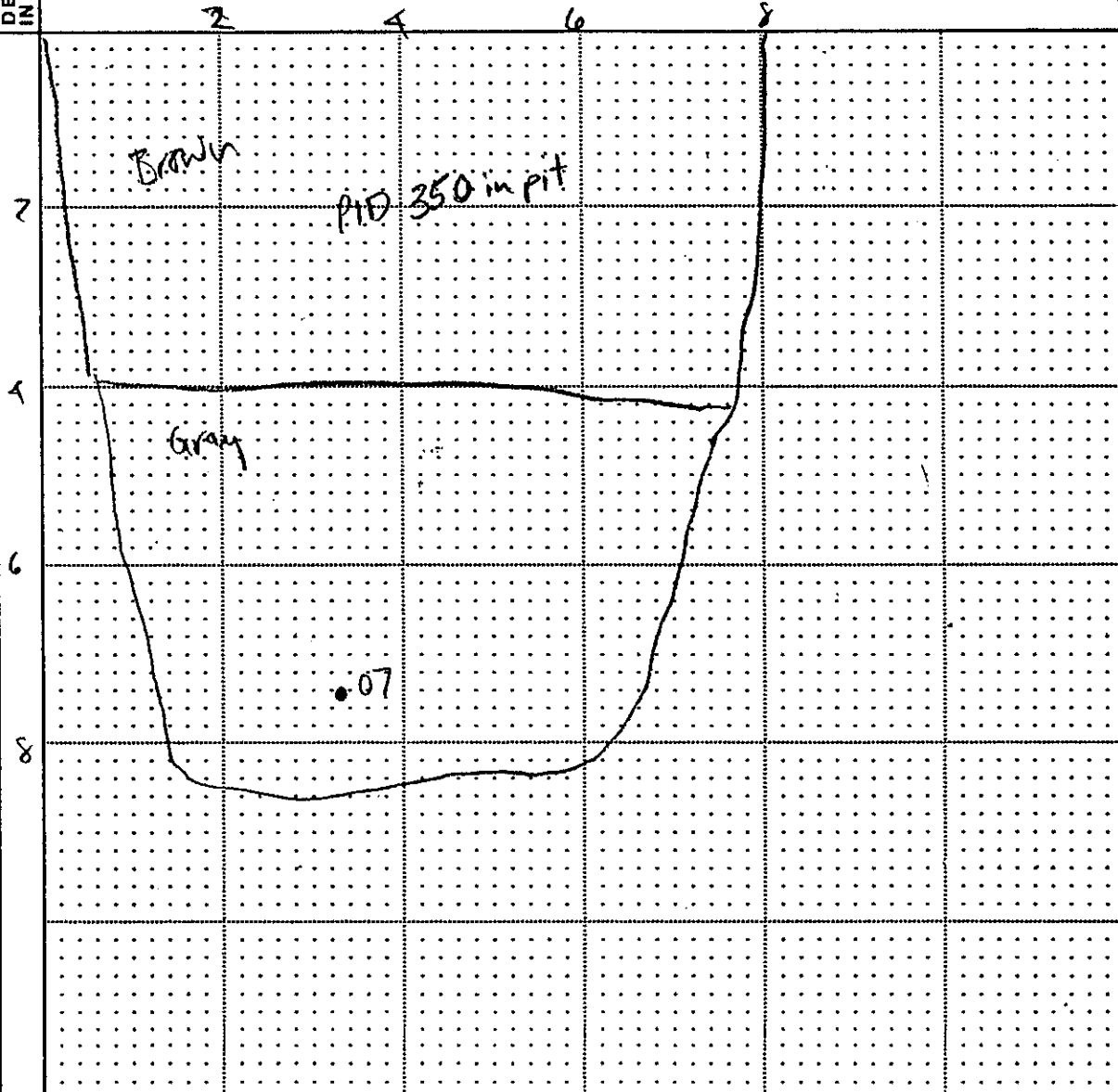
Beach
Brown w/ organic (shells)
Strong HC odor - gas

Gray Beach Sands w/ shells

PID in SP high as 850 ppm
SULFUR smell - Nauseous
Major HC odor

Soil sample 171907
Hole won't stay open - collapses water? 

07



FIELD LOG OF TEST PIT

JOB NO. T-1719-02

TEST PIT TP-5

PROJECT YARD BLDG
DATE 10/11/96 LOCATION OLYMPIA, WA
LOGGED BY TE SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS	GROUND WATER	SAMPLES	DEPTH IN FEET	SKETCH OF <u>N</u> PIT SIDE		SURFACE ELEVATION _____	
				HORIZONTAL DISTANCE IN FEET			
				2	4	6	8
Brown Beach sand			2				
gray Sandysilt moist			4				
Gray beach sand			6				
		08	8				
No sheen or H ₂ O		09					

7.5

FIELD LOG OF TEST PIT

JOB NO. T-19-19-02

TEST PIT TP-6

PROJECT YARD 2/1205

DATE 10/11/96

LOCATION Olympos, N.A.

LOGGED BY TF

SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS

GROUND WATER

SAMPLES

DEPTH IN FEET

SKETCH OF N PIT SIDE

SURFACE ELEVATION _____

HORIZONTAL DISTANCE IN FEET

light gray beach SAND
No HC odor

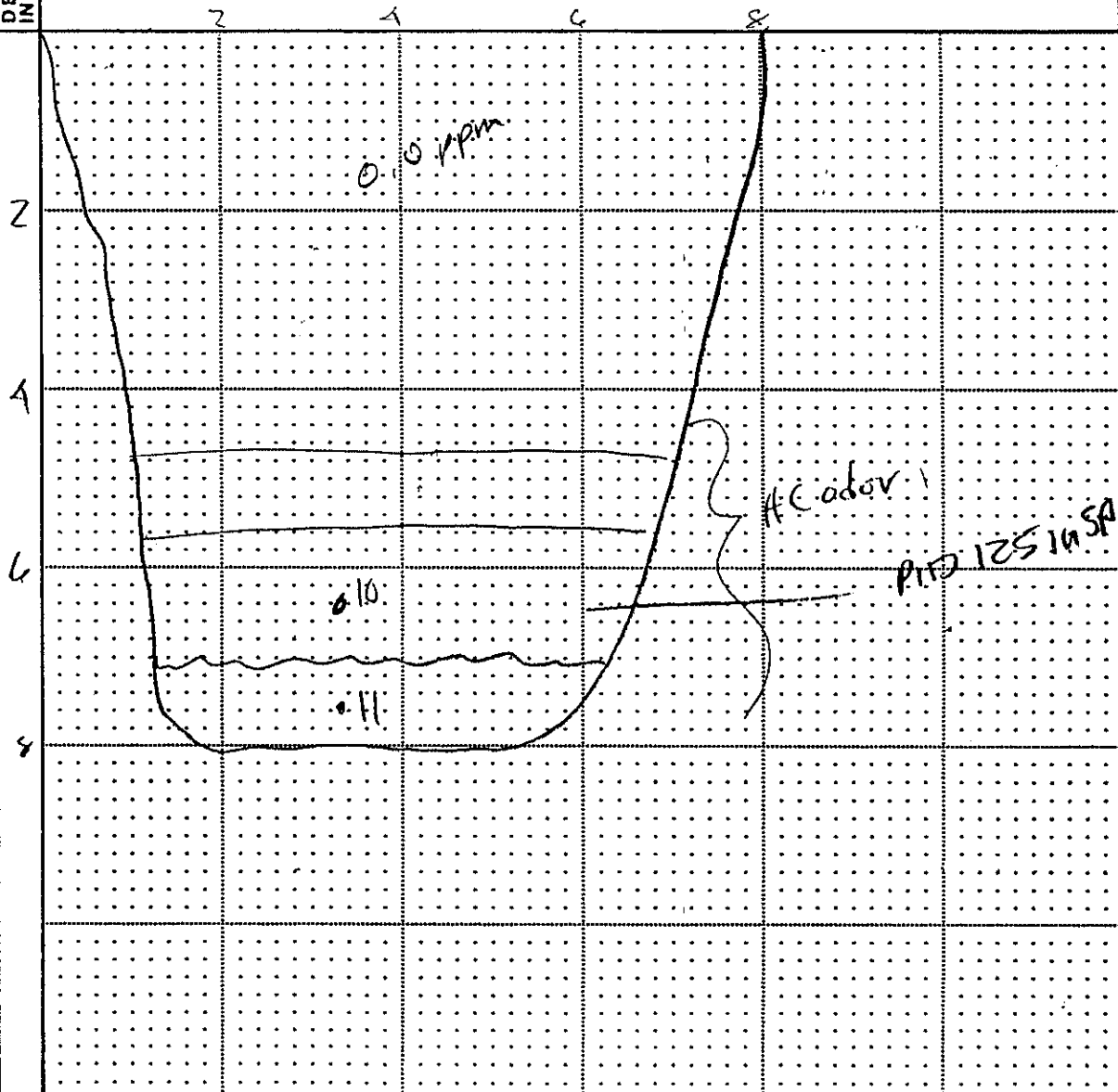
gray sandy silt

DK gray Beach SAND
strong HC odor

light product film on H₂O

-10

-11



FIELD LOG OF TEST PIT

JOB NO. T-1714-02

TEST PIT TP-7

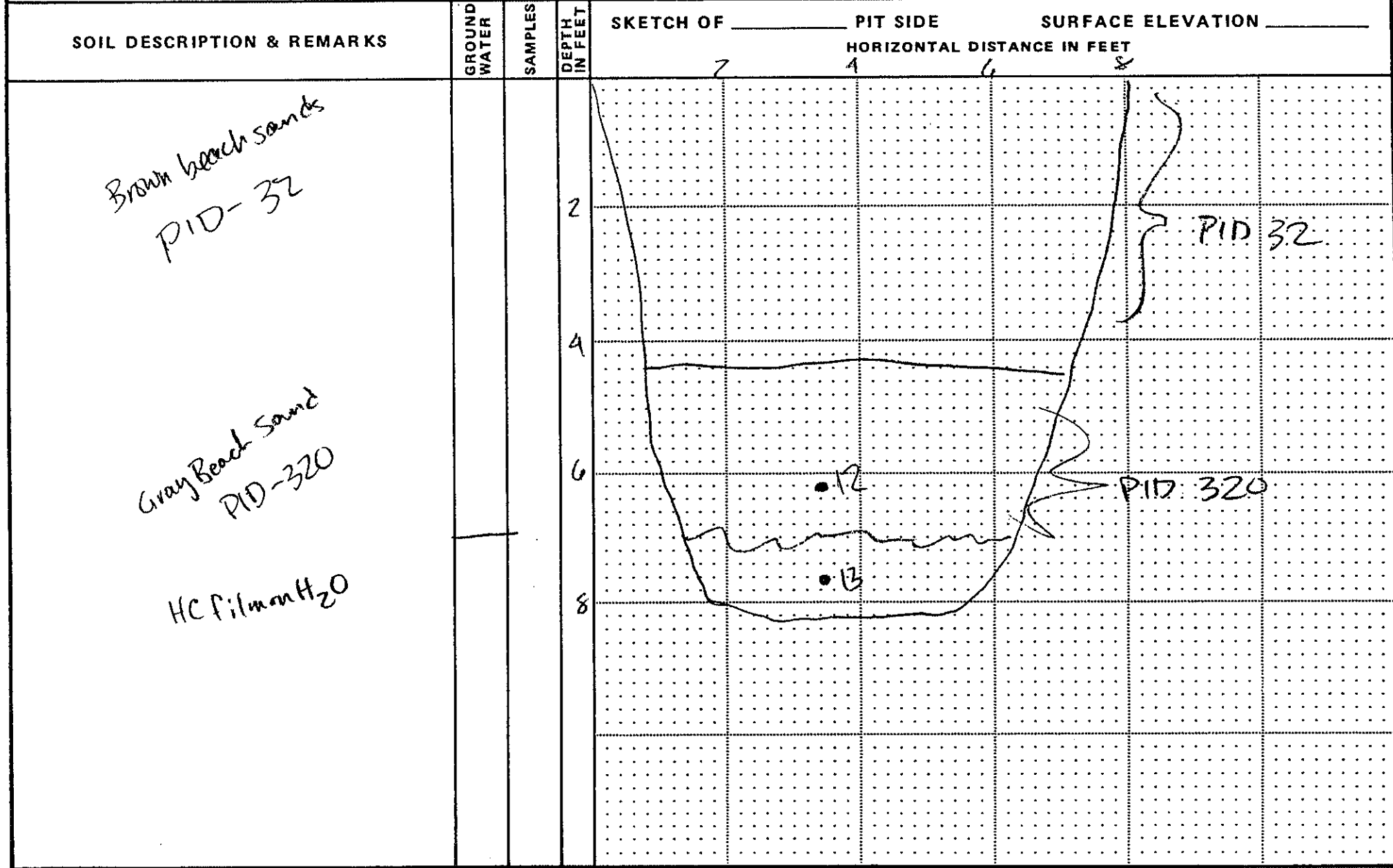
PROJECT YARD BRAD

DATE 10/11/96

LOCATION OLYMPIA, WA

LOGGED BY TE

SUBCONTRACTOR _____



FIELD LOG OF TEST PIT

JOB NO. _____

TEST PIT TP-8

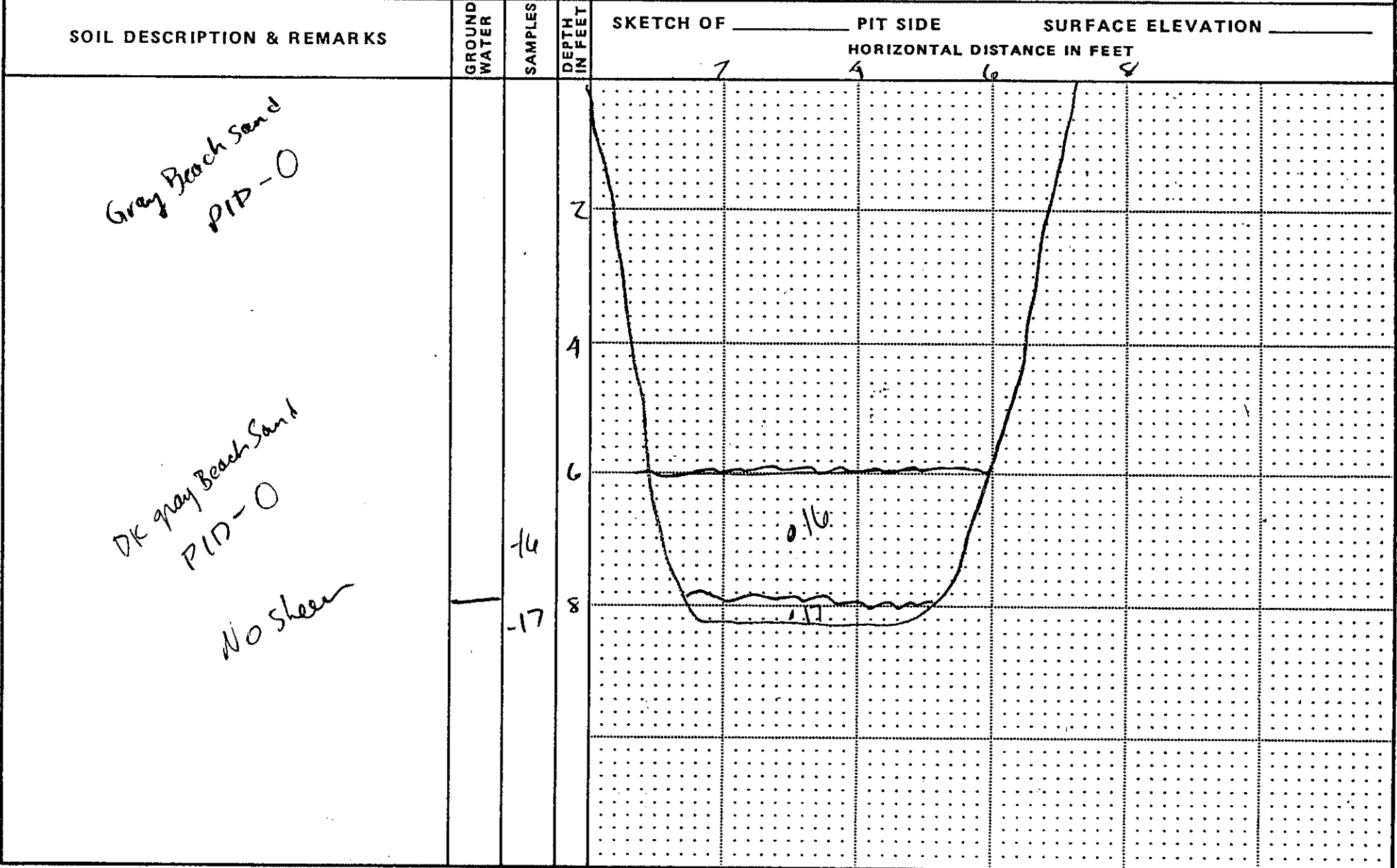
PROJECT YARD BIRD
DATE 10/11/96 LOCATION OLYMPIA, WA
LOGGED BY JF SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS	GROUND WATER	SAMPLES	DEPTH IN FEET	SKETCH OF _____ PIT SIDE		SURFACE ELEVATION _____	
				HORIZONTAL DISTANCE IN FEET			
<p>Gray Beach SAND PID: 0.0</p> <p>Gray Fine sandy SILT</p> <p>DK Gray B. SAND PID - 0.0</p> <p>No show in H₂O</p>			<p>2</p> <p>4</p> <p>6</p> <p>8</p> <p>14</p> <p>15</p>	<p>2</p> <p>A</p> <p>6</p> <p>8</p>			

FIELD LOG OF TEST PIT

JOB NO. T-1719-02

TEST PIT TP-9 PROJECT TRAD BIRDS
 DATE 10/11/96 LOCATION DUMFRIES, VA
 LOGGED BY TF SUBCONTRACTOR _____



FIELD LOG OF TEST PIT

JOB NO. T-1719-02

TEST PIT TP-10

PROJECT YARD BROW

DATE 10/11/96

LOCATION OLYMPIA, MA

LOGGED BY TF

SUBCONTRACTOR _____

SOIL DESCRIPTION & REMARKS

GROUND WATER

SAMPLES

DEPTH IN FEET

SKETCH OF _____ PIT SIDE

SURFACE ELEVATION _____

HORIZONTAL DISTANCE IN FEET

Z A G 8

Brown/gray Beach SAND
PID 115 ppm

Gray Beach Sand
PID - 480 ppm

Heavy silt Pit collapses 10'
H₂O slow recharge
Soil @ 11' PID 1075 ppm

-18

-19

2

1

4

8

10

• 18

• 19

PID 1075 ppm



APPENDIX B
ANALYTICAL LABORATORY REPORTS

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**7110 38th Drive SE
Lacey, Washington 98503**

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: 360-459-4670
Fax: 360-459-3432**

October 15, 1996

Brian Clark
Shannon & Wilson
P.O. Box 300303
Seattle, WA 98103

Re: Project No. T-1719-02

Dear Mr. Clark:

Please find enclosed the data report for analyses of soil samples conducted off-site October 14, 1996, from the Yard Birds Property/Farmers Market Project in Olympia, Washington. Soil samples were analyzed for Gasoline by WTPH-G and BTEX by EPA Method 8020, and Diesel and Heavy Oil by WTPH-D/D Extended.

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

TEG Northwest appreciates the opportunity to have provided analytical services to Shannon and Wilson for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/- accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

TPH-Gasoline, TPH-Diesel

(Gasoline and/or Diesel, Modified EPA 8015, WTPH-G and WTPH-D)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. A duplicate sample is run at a rate of 1 per 10 samples (or a matrix spike sample is prepared and analyzed). At least 1 method blank is run per 10 samples analyzed.

Purgeable Volatile Aromatics
(BTEX, EPA 602/8020)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Gasoline (WTPH-G) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/14/96	nd	nd	nd	nd	nd	88
171901	10/14/96	47	22	118	128	6860	int
171903	10/14/96	nd	nd	nd	nd	nd	90
171905	10/14/96	2.32	1.16	14	22	1250	int
171907	10/14/96	nd	nd	nd	nd	nd	100
171908	10/14/96	nd	nd	nd	nd	nd	102
171908 Dup	10/14/96	nd	nd	nd	nd	nd	103
171910	10/14/96	nd	nd	nd	nd	nd	99
171912	10/14/96	nd	nd	nd	nd	nd	97
171914	10/14/96	nd	nd	nd	nd	nd	92
171916	10/14/96	nd	0.11	nd	nd	nd	90
171918	10/14/96	nd	nd	1.95	21.6	244	int
Detection Limits		0.05	0.05	0.05	0.05	10	

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET
 Olympia, Washington
 Shannon & Wilson, Inc.
 Project No.: T-1719-02

Gasoline (WTPH-G) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene ug/l	Toluene ug/l	Eth Benz ug/l	Xylene ug/l	Gasoline ug/l	Recovery (%)
Meth. Blank	10/14/96	nd	nd	nd	nd	nd	80
171902	10/14/96	1120	200	6080	1060	4700	int
171904	10/14/96	nd	nd	nd	nd	nd	99
171906	10/14/96	280	nd	150	71	9800	112
171909	10/14/96	nd	nd	nd	nd	nd	99
171911	10/14/96	nd	nd	nd	nd	nd	127
171913	10/14/96	19	10	258	3.7	7300	108
171915	10/14/96	nd	nd	nd	nd	nd	105
171917	10/14/96	nd	nd	nd	nd	nd	105
171919	10/14/96	nd	nd	nd	nd	nd	94
171919 Dup	10/14/96	nd	nd	nd	nd	nd	106
Detection Limits		1	1	1	1	200	

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

"int" Indicates that interferences prevent determination.

=====

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Diesel and Heavy Oil Analyses for Soils by WTPH-D/D Extended

Sample Number	Date Analyzed	Recovery (%)	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/14/96	121	nd	nd
171901	10/14/96	int	13300	nd
171903	10/14/96	98	nd	nd
171905	10/14/96	int	7220	nd
171907	10/14/96	109	84	nd
171908	10/14/96	97	nd	nd
171908 Dup	10/14/96	108	nd	nd
171910	10/14/96	99	nd	nd
171912	10/14/96	94	129	nd
171914	10/14/96	104	nd	nd
171916	10/14/96	92	nd	nd
171918	10/14/96	int	4440	nd
Detection Limits			20	40

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Diesel and Heavy Oil Analyses for Soils by WTPH-D/D Extended

Sample Number	Date Analyzed	Recovery (%)	Diesel ug/l	Heavy Oil ug/l
Meth. Blank	10/14/96	78	nd	nd
171902	10/14/96	int	234000	nd
171904	10/14/96	97	nd	nd
171906	10/14/96	int	7300	nd
171909	10/14/96	127	nd	nd
171911	10/14/96	108	5180	nd
171913	10/14/96	108	28300	nd
171915	10/14/96	104	nd	nd
171917	10/14/96	97	nd	nd
171919	10/14/96	95	26000	nd
171919 Dup	10/14/96	113	25900	nd
Detection Limits			200	400

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Gasoline (WTPH-G) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene mg/kg	Toluene mg/kg	Eth Benz mg/kg	Xylene mg/kg	Gasoline mg/kg	Recovery (%)
Meth. Blank	10/14/96	nd	nd	nd	nd	nd	88
171901	10/14/96	47	22	118	128	6860	int
171903	10/14/96	nd	nd	nd	nd	nd	90
171905	10/14/96	2.32	1.16	14	22	1250	int
171907	10/14/96	nd	nd	nd	nd	nd	100
171908	10/14/96	nd	nd	nd	nd	nd	102
171908 Dup	10/14/96	nd	nd	nd	nd	nd	103
171910	10/14/96	nd	nd	nd	nd	nd	99
171912	10/14/96	nd	nd	nd	nd	nd	97
171914	10/14/96	nd	nd	nd	nd	nd	92
171916	10/14/96	nd	0.11	nd	nd	nd	90
171918	10/14/96	nd	nd	1.95	21.6	244	int
Detection Limits		0.05	0.05	0.05	0.05	10	

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Gasoline (WTPH-G) & BTEX (EPA 8020) Analyses for Soils

Sample Number	Date Analyzed	Benzene ug/l	Toluene ug/l	Eth Benz ug/l	Xylene ug/l	Gasoline ug/l	Recovery (%)
Meth. Blank	10/14/96	nd	nd	nd	nd	nd	80
171902	10/14/96	1120	200	6080	1060	4700	int
171904	10/14/96	nd	nd	nd	nd	nd	99
171906	10/14/96	280	nd	150	71	9800	112
171909	10/14/96	nd	nd	nd	nd	nd	99
171911	10/14/96	nd	nd	nd	nd	nd	127
171913	10/14/96	19	10	258	3.7	7300	108
171915	10/14/96	nd	nd	nd	nd	nd	105
171917	10/14/96	nd	nd	nd	nd	nd	105
171919	10/14/96	nd	nd	nd	nd	nd	94
171919 Dup	10/14/96	nd	nd	nd	nd	nd	106
Detection Limits		1	1	1	1	200	

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET
 Olympia, Washington
 Shannon & Wilson, Inc.
 Project No.: T-1719-02

Diesel and Heavy Oil Analyses for Soils by WTPH-D/D Extended

Sample Number	Date Analyzed	Recovery (%)	Diesel mg/kg	Heavy Oil mg/kg
Meth. Blank	10/14/96	121	nd	nd
171901	10/14/96	int	13300	nd
171903	10/14/96	98	nd	nd
171905	10/14/96	int	7220	nd
171907	10/14/96	109	84	nd
171908	10/14/96	97	nd	nd
171908 Dup	10/14/96	108	nd	nd
171910	10/14/96	99	nd	nd
171912	10/14/96	94	129	nd
171914	10/14/96	104	nd	nd
171916	10/14/96	92	nd	nd
171918	10/14/96	int	4440	nd
Detection Limits			20	40

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Diesel and Heavy Oil Analyses for Soils by WTPH-D/D Extended

Sample Number	Date Analyzed	Recovery (%)	Diesel ug/l	Heavy Oil ug/l
Meth. Blank	10/14/96	78	nd	nd
171902	10/14/96	int	234000	nd
171904	10/14/96	97	nd	nd
171906	10/14/96	int	7300	nd
171909	10/14/96	127	nd	nd
171911	10/14/96	108	5180	nd
171913	10/14/96	108	28300	nd
171915	10/14/96	104	nd	nd
171917	10/14/96	97	nd	nd
171919	10/14/96	95	26000	nd
171919 Dup	10/14/96	113	25900	nd
Detection Limits			200	400

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

"int" Indicates that interferences prevent determination.

CHAIN OF CUSTODY RECORD

Analysis Parameters/Sample Container Description
 (include preservative if used)

Comp.	Grab	WTPH-6/BTK	WTPH-DE
Lab No.	Lab No.	Lab No.	Lab No.

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	WTPH-6/BTK	WTPH-DE	Total Number of Containers	Remarks/Matrix
171901		100Z	10/11/96	X	X	X	X	1	SOIL (SL)
T-02		1020	[Handwritten signature]	X	X	X	X	3	GW
03		1050		X	X	X	X	1	SL
04		1100		X	X	X	X	3	GW
05		1130		X	X	X	X	1	SL
06		1200		X	X	X	X	3	GW
07		1220		X	X	X	X	1	SL
08		1240		X	X	X	X	1	SL
09		1305		X	X	X	X	3	GW
T-10		1335		X	X	X	X	1	SL

Project Information

Project Number: 1-1719-02
 Project Name: FARMERS MARKET
 Contact: Brian Clark
 Ongoing Project? Yes No
 Sampler: TLF

Sample Receipt

Total Number of Containers: 37
 COC Seals/Intact? Y/N/NA
 Received Good Cond./Cold
 Delivery Method: HAND
 (attach shipping bill, if any)

Instructions

Requested Turn Around Time: STANDARD
 Special Instructions: Willfax in analysis on Monday

Distribution: White - w/shipment - returned to Shannon & Wilson w/ Laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - Job File

Relinquished By: 1	Relinquished By: 2	Relinquished By: 3
Signature: [Signature] Printed Name: TOLLIVER Company: SATW	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____
Time: 1730 Date: 10/11/96	Time: _____ Date: _____	Time: _____ Date: _____
Received By: 1	Received By: 2	Received By: 3
Signature: [Signature] Printed Name: PATTY KOROLEC Company: TSC-ULI INC	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____
Time: 2:01 Date: 10-11-96	Time: _____ Date: _____	Time: _____ Date: _____

YARD BIRDS PROPERTY / FARMERS MARKET

CHAIN OF CUSTODY RECORD

Analysis Parameters/Sample Container Description (include preservative if used)

Comp. Grab	UTPH-HLM	UTPH-D/EM
------------	----------	-----------

Sample Identity	Lab No.	Time	Date Sampled	Comp. Grab	UTPH-HLM	UTPH-D/EM	Total Number of Containers	Remarks/Matrix
171911		1340	10/11/96	X	X	X	3	GW
12		1410	[Signature]	X	X	X	1	SL
13		1420		X	X	X	3	GW
14		1520		X	X	X	1	SL
15		1530		X	X	X	3	GW
16		1510	[Signature]	X	X	X	1	SL
17		1500		X	X	X	3	GW
18		1545		X	X	X	1	SL
19		1605	[Signature]	X	X	X	3	GW

Project Information		Sample Receipt	
Project Number: T-1719-02	Total Number of Containers: 57	COC Seals/Intact? Y/M/N/A	Received Good Cond./Cold
Project Name: Fairbanks Market	Delivery Method: HAND	Ongoing Project? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	(attach shipping bill, if any)
Contact: BLC	Sampler: TLF		

Relinquished By: 1	Relinquished By: 2	Relinquished By: 3
Signature: [Signature]	Signature: _____	Signature: _____
Printed Name: [Name]	Printed Name: _____	Printed Name: _____
Date: 10/11/96	Date: _____	Date: _____
Company: STU	Company: _____	Company: _____

Received By: 1	Received By: 2	Received By: 3
Signature: [Signature]	Signature: _____	Signature: _____
Printed Name: [Name]	Printed Name: _____	Printed Name: _____
Date: 10-11-96	Date: _____	Date: _____
Company: TEG	Company: _____	Company: _____

Instructions
Requested Turn Around Time: STANDARD
Special Instructions:

Distribution: White - shipment - returned to Shannon & Wilson w/ Laboratory report
 Yellow - shipment - for consignee files
 Pink - Shannon & Wilson - Job File

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**7110 38th Drive SE
Lacey, Washington 98503**

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: 360-459-4670
Fax: 360-459-3432**

November 6, 1996

Brian Clark
Shannon & Wilson
P.O. Box 300303
Seattle, WA 98103

Re: Project No. T-1719-02

Dear Mr. Clark:

Please find enclosed the data report for analyses of water samples conducted off-site October 31, 1996, from the Yard Birds Property/Farmers Market Project in Olympia, Washington. The water samples were analyzed for Gasoline by WTPH-G and BTEX by EPA Method 8020, and Diesel by WTPH-D.

The results of these analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Shannon and Wilson for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

TPH-Gasoline, TPH-Diesel

(Gasoline and/or Diesel, Modified EPA 8015, WTPH-G and WTPH-D)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. A duplicate sample is run at a rate of 1 per 10 samples (or a matrix spike sample is prepared and analyzed). At least 1 method blank is run per 10 samples analyzed.

Purgeable Volatile Aromatics
(BTEX, EPA 602/8020)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

YARD BIRDS PROPERTY/FARMERS MARKET
 Olympia, Washington
 Shannon & Wilson, Inc.
 Project No.: T-1719-02

Gasoline (WTPH-G) & BTEX (EPA 8020) Analyses for Waters

Sample Number	Date Analyzed	Benzene ug/l	Toluene ug/l	Eth Benz ug/l	Xylene ug/l	Gasoline ug/l	Recovery (%)
Meth. Blank	10/31/96	nd	nd	nd	nd	nd	101
171920	10/31/96	12.8	2.8	nd	nd	nd	93
171920 Dup	10/31/96	12.2	6.4	nd	nd	nd	105
171921	10/31/96	nd	nd	nd	nd	nd	102
171923	10/31/96	12.0	1.5	12.0	nd	nd	88
171924	10/31/96	3.6	3.2	nd	3.2	nd	86
171925	10/31/96	50.0	7.1	nd	8.0	862	82
171926	10/31/96	nd	nd	nd	nd	nd	88
171927	10/31/96	nd	nd	nd	nd	nd	88
Detection Limits		1	1	1	1	200	

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET
 Olympia, Washington
 Shannon & Wilson, Inc.
 Project No.: T-1719-02

Diesel Analyses for Water by WTPH-D

Sample Number	Date Analyzed	Recovery (%)	Diesel ug/l
Meth. Blank	10/31/96	110	nd
171920	10/31/96	94	54000
171920 Dup	10/31/96	108	38600
171921	10/31/96	104	nd
171923	10/31/96	101	nd
171924	10/31/96	93	nd
171925	10/31/96	104	nd
171926	10/31/96	89	nd
171927	10/31/96	102	nd
Detection Limits			200

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Gasoline (WTPH-G) & BTEX (EPA 8020) Analyses for Waters

Sample Number	Date Analyzed	Benzene ug/l	Toluene ug/l	Eth Benz ug/l	Xylene ug/l	Gasoline ug/l	Recovery (%)
Meth. Blank	10/31/96	nd	nd	nd	nd	nd	101
171920	10/31/96	12.8	2.8	nd	nd	nd	93
171920 Dup	10/31/96	12.2	6.4	nd	nd	nd	105
171921	10/31/96	nd	nd	nd	nd	nd	102
171923	10/31/96	12.0	1.5	12.0	nd	nd	88
171924	10/31/96	3.6	3.2	nd	3.2	nd	86
171925	10/31/96	50.0	7.1	nd	8.0	862	82
171926	10/31/96	nd	nd	nd	nd	nd	88
171927	10/31/96	nd	nd	nd	nd	nd	88
Detection Limits		1	1	1	1	200	

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

"int" Indicates that interferences prevent determination.

YARD BIRDS PROPERTY/FARMERS MARKET

Olympia, Washington

Shannon & Wilson, Inc.

Project No.: T-1719-02

Diesel Analyses for Water by WTPH-D

Sample Number	Date Analyzed	Recovery (%)	Diesel ug/l
Meth. Blank	10/31/96	110	nd
171920	10/31/96	94	54000
171920 Dup	10/31/96	108	38600
171921	10/31/96	104	nd
171923	10/31/96	101	nd
171924	10/31/96	93	nd
171925	10/31/96	104	nd
171926	10/31/96	89	nd
171927	10/31/96	102	nd

Detection Limits 200

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

"int" Indicates that interferences prevent determination.



400 N. 34th Street, Suite 100
 Seattle, WA 98103
 (206) 632-8020

1500 Olive Blvd., Suite 276
 St. Louis, MO 63141
 (314) 872-8170

5430 Fairbanks Street, Suite 3
 Anchorage, AK 99518
 (907) 561-2120

CHAIN OF CUSTODY RECORD

1354 N. Grandridge Blvd.
 Kennewick, WA 98336
 (509) 735-1280

2412 N. 30th St., Suite 201
 Tacoma, WA 98407
 (206) 759-0156

Page 1 of 1
 Laboratory TEG
 Attn: _____

Analysis Parameters/Sample Container Description (include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	WTPH-D			Remarks/Matrix
				Comp.	Grab	Total Number of Containers	
171920		1100	10/21/96	X	X	3	water
171921		1035		X	X	3	
171922	LOW			X	X	3	
171923		0955		X	X	3	
171924		0905		X	X	3	
171925		1125		X	X	3	
171926		0830		X	X	3	
171927		0755		X	X	3	

Project Information

Project Number: 7-177-02

Project Name: _____

Contact: BEVA CHECK

Ongoing Project? Yes No

Sampler: LAW

Sample Receipt

Total Number of Containers: _____

COC Seals/Intact? Y/M/N/A

Received Good Cond./Cold: _____

Delivery Method: _____

(attach shipping bill, if any)

Instructions

Requested Turn Around Time: Standard

Special Instructions: Sample # 171920 has free product

Distribution: White - w/shipment - returned to Shannon & Wilson w/ Laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - Job File

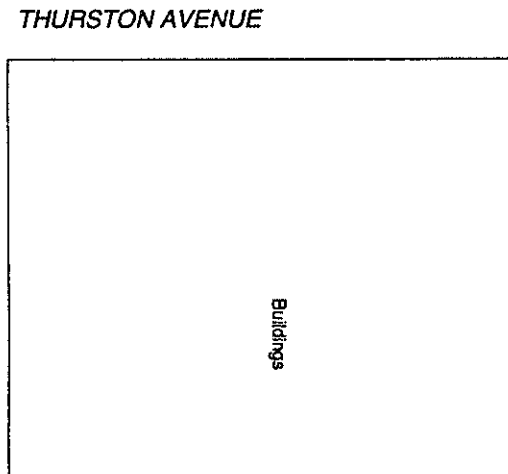
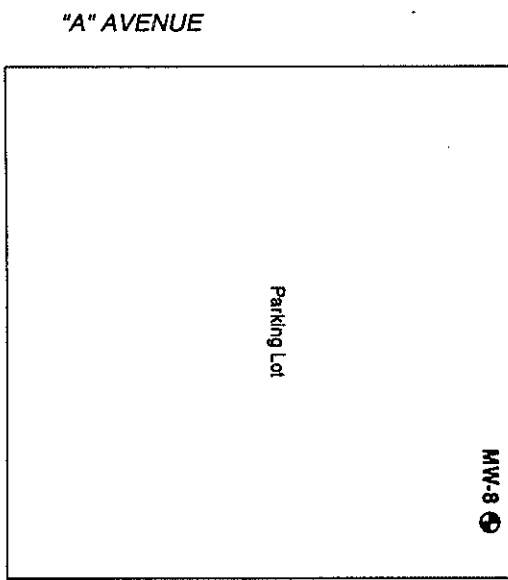
Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>[Signature]</u>	Signature: _____	Signature: _____
Printed Name: <u>[Name]</u>	Printed Name: _____	Printed Name: _____
Date: <u>[Date]</u>	Date: _____	Date: _____
Company: <u>[Company]</u>	Company: _____	Company: _____
Received By: 1.	Received By: 2.	Received By: 3.
Signature: <u>[Signature]</u>	Signature: _____	Signature: _____
Printed Name: <u>[Name]</u>	Printed Name: _____	Printed Name: _____
Date: <u>[Date]</u>	Date: _____	Date: _____
Company: <u>[Company]</u>	Company: _____	Company: _____

ATTACHMENT D

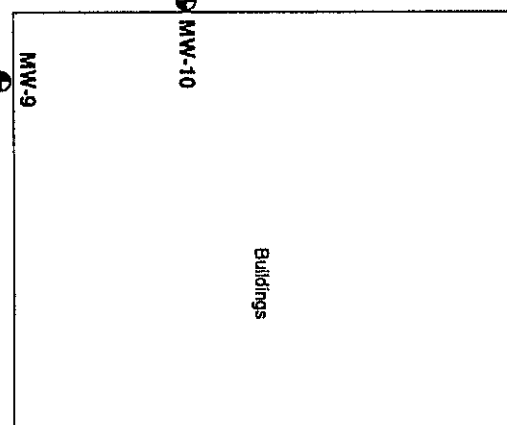
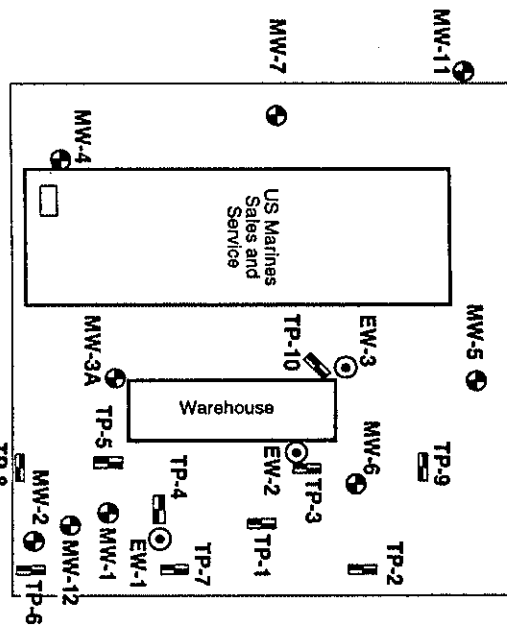
FIGURES



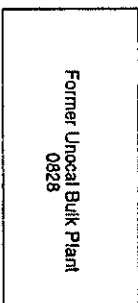
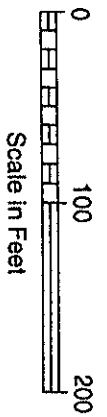
NORTH WASHINGTON STREET



NORTH CAPITAL WAY



NORTH COLUMBIA STREET



- LEGEND**
- Test Pit Designation and Approximate Location (previous study)
 - Monitoring Well Designation and Approximate Location
 - Extraction Well Designation and Approximate Location

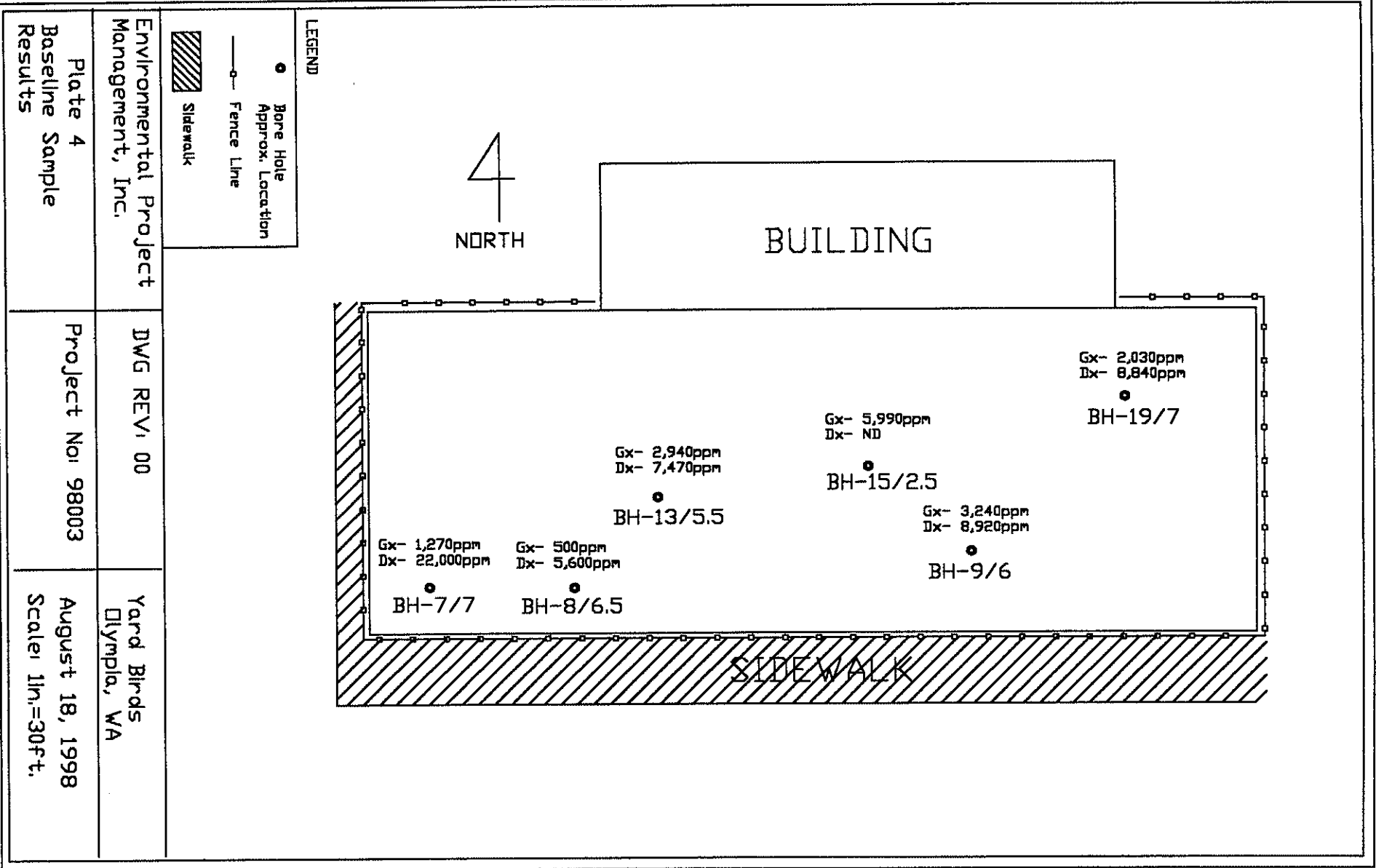
Yard Birds Property - Farmers Market
Olympia, Washington

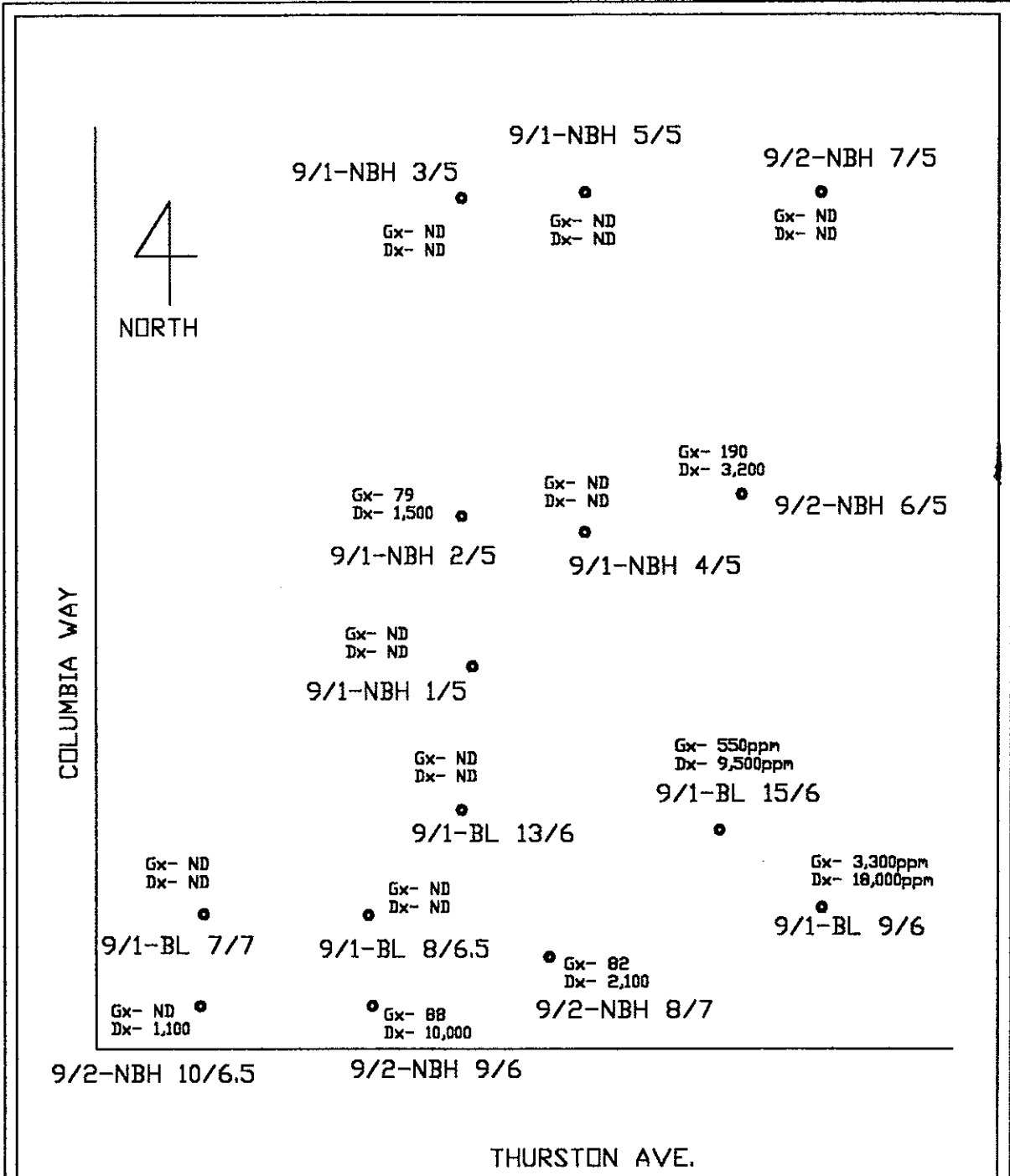
SITE PLAN

September 1997 T-1719-03

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 2





LEGEND

●	Bore Hole Approx. Location
Gx- ND Dx- 1,100	Laboratory Results
9/2-NBH 10/6.5	Sample I.D.

Environmental Project
Management, Inc.

DWG REV: 00

Yard Birds
Olympia, WA

Plate 6
Progress Samples

Project No: 98003

September 1, 1999
Scale: 1in.=30ft.

ATTACHMENT E

FIGURES

ATTACHMENT F

THE GEODESIGN SAMPLE LOCATIONS

VIP'S INDUSTRIES, INC.

FAX TRANSMISSION COVER SHEET

DATE: 10-8-99 TIME: 4:10

TOTAL PAGES: 7 (Including this one)

ATTENTION: Mike Hester

COMPANY: EPMI

FAX NO: 1-208-322-9227

FROM: Bever Johnson

TITLE: _____

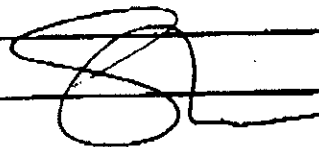
FAX NO: 503-682-9257 (AVAILABLE 24 HOURS PER DAY)

QUESTION AND/OR PROBLEMS: CALL Monica AT (503) 682-9284.

COMMENTS:

RE: Phx Inv
Oly, Wash

Mike - per request, copy of
lab results (and map) regarding
our 7/29/99 geo probe testing
on site in the building area.



This message is intended for the use of the individual or entity to which it is transmitted and may contain information that is privileged and confidential. If the reader of this communication is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and destroy the original communication.

Aug-04-99 04:03P

P.05

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

VIPS-5 PROJECT
Olympia, Washington
GeoDesign

Analyses of Diesel (NWTPH-Dx) in Soil.

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)
Method Blank	7/30/99	89	nd
Method Blank	8/2/99	94	nd
GP-1 2-3.5'	7/30/99	98	270
GP-1 7-10'	7/31/99	int	740
GP-2 2-3.5'	7/30/99	112	nd
GP-2 6-8'	7/30/99	89	nd
GP-4 2-3.5'	7/30/99	100	nd
GP-4 5-7'	7/30/99	92	nd
GP-5 2-3.5'	7/31/99	109	nd
GP-5 5-7'	7/30/99	103	nd
GP-5 5-7' Dup	7/30/99	81	nd
GP-6 2-3.5'	7/30/99	99	nd
GP-6 6-8'	7/30/99	109	nd
GP-7 2-3.5'	7/30/99	100	nd
GP-7 2-3.5' Dup	7/30/99	98	nd
GP-7 6-8'	7/30/99	99	nd
GP-9 2-3.5'	7/31/99	94	nd
GP-9 5-7'	7/30/99	110	nd
GP-11 2-3.5'	8/2/99	94	nd
GP-11 6-8'	8/2/99	106	nd
Method Detection Limits			20

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

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE: 65% TO 135%

ANALYSES PERFORMED BY: Chantel Kamm & Michael Dee

DATA REVIEWED BY: Sherry Chilcutt

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

VIPS-S PROJECT
 Olympia, Washington
 GeoDesign

Analyses of Gasolines (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	7/30/99	nd	nd	nd	nd	nd	103
GP-1 2-3.5'	7/30/99	nd	nd	nd	nd	nd	102
GP-1 7-10'	7/30/99	2.1	3.5	nd	46	3300	80
GP-2 2-3.5'	7/30/99	nd	nd	nd	nd	nd	116
GP-2 6-8'	7/30/99	nd	nd	nd	nd	nd	98
GP-4 2-3.5'	7/30/99	nd	nd	nd	0.10	nd	101
GP-4 5-7'	8/2/99	nd	nd	nd	nd	nd	100
GP-5 2-3.5'	8/2/99	nd	nd	nd	nd	nd	101
GP-5 5-7'	8/2/99	nd	nd	nd	nd	nd	100
GP-6 2-3.5'	8/2/99	nd	nd	nd	nd	nd	95
GP-6 6-8'	8/2/99	nd	nd	nd	nd	nd	101
GP-7 2-3.5'	8/2/99	nd	nd	nd	nd	nd	102
GP-7 2-3.5' Dup.	7/30/99	nd	nd	nd	nd	nd	100
GP-7 6-8'	8/2/99	nd	nd	nd	nd	nd	106
GP-9 2-3.5'	7/30/99	nd	nd	nd	nd	nd	98
GP-9 5-7'	7/30/99	nd	nd	nd	nd	nd	106
GP-11 2-3.5'	8/2/99	nd	nd	nd	nd	nd	106
GP-11 6-8'	8/2/99	nd	nd	nd	nd	nd	94
Method Detection Limits		0.05	0.05	0.05	0.05	10	

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

"int" indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%.

ANALYSIS PERFORMED BY: Chantel Kumm & Michael Dec
 DATA REVIEWED BY: Sherry Chilcutt

Aug-04-99 04:03P

P. 07

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

VIPS-5 PROJECT
 Olympia, Washington
 GeoDesign

Analyses of BTEX (EPA Method 8021B) in Water

Sample Number	Date Analyzed	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Surrogate Recovery (%)
Method Blank	7/30/99	nd	nd	nd	nd	103
GP-1	7/30/99	30	33	nd	100	100
GP-2	7/30/99	nd	nd	nd	nd	95
GP-4	7/30/99	nd	nd	nd	nd	80
GP-6	7/30/99	nd	nd	nd	nd	97
GP-8	7/30/99	nd	nd	nd	nd	104
GP-8 Dup.	7/30/99	nd	nd	nd	nd	89
GP-9	7/30/99	nd	nd	nd	nd	96
GP-11	7/30/99	nd	nd	nd	nd	89
Method Detection Limits		1	1	1	1	

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

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Chantel Kamm & Michael Dec
DATA REVIEWED BY: Sherry Chilcutt



TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECEIPT

CLIENT: Geo Design
 ADDRESS: 17400 SW Upper Boonville Ferry Portland
 PHONE: _____ FAX: _____
 CLIENT PROJECT #: _____ PROJECT MANAGER: _____

DATE: 7/29-99 PAGE 2 OF 2
 PROJECT NAME: VIP's - 5
 LOCATION: Olympia
 COLLECTOR: _____ DATE OF COLLECTION: 7/91

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSE										NOTES	Total Number of Containers			
					VOA 6015 (P)	VOA 6015 (S)	VOA 6015 (T)	SEM VOL	TPH 6015 (P)	TPH 6015 (S)	TPH 6015 (T)	TPH 6015 (C)	TPH 6015 (M)	TPH 6015 (O)			TPH 6015 (A)		
1. GP-5	2-35		Soil		X														
2. GP-5	5-7				X														
3. GP-5	5-7				X														
4. GP-6	2-35				X														
5. GP-6	6-8				X														
6. GP-7	2-35				X														
7. GP-7	6-8				X														
8. GP-8	2-35				X														
9. GP-8	5-7				X														
10. GP-9	2-35				X														
11. GP-9	5-7				X														
12. GP-11	2-35				X														
13. GP-11	6-8				X														
14. GP-12	2-35				X														
15. GP-12	5-7				X														
16.																			
17.																			
18.																			

RELINQUISHED BY (Signature) <u>Anna Newman</u>	DATE/TIME <u>7/29/99 4:47pm</u>	RECEIVED BY (Signature) <u>Jim McCall</u>	DATE/TIME <u>7/29/99</u>
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS _____

CHAIN OF CUSTODY SEALS Y/N/A _____

SEALS INTACT Y/N/A _____

RECEIVED CHILLED/COOL _____

NOTES: _____

LABORATORY NOTES: _____

Turn Around Time: _____

SAMPLE DISPOSAL INSTRUCTIONS

TEG DISPOSAL @ \$2.00 each Return Pickup

ATTACHMENT G

ENZYME TECHNOLOGIES LETTER



Enzyme Technologies

Risk Management

2233 NE 244th Avenue, Bldg. C1 Troutdale, OR 97060-1062 Phone: (503)661-8991 fax: (503)669-7422 E-mail: etec@pacifier.c

April 16, 1997

Brian Clark
Shannon & Wilson
400 North 34th ST., Suite 100
PO Box 300303
Seattle, WA. 98103

RE: Project Status, Former Yard Birds Site, Olympia, Washington.

Dear Brian,

Following is a status report concerning the former yard birds site. ETEC mobilized manpower and equipment to the site on April 11, 1997 and laid out the boundaries for the injection system to treat the site. An area approximately forty feet wide by thirty five feet long (35'W x 40' L) was marked off for the lateral injection gallery and the blacktop was removed and stockpiled at the west end of the site. Upon completion of the removal of the blacktop, the first trench was excavated at the west end of the area running from north to south at the western perimeter of TP-1. Contamination was uniformly distributed at approximately four (4') feet BGS in the trench at high concentrations. Upon completing the trench, ETEC discovered a buried underground storage tank located west of TP-1 at the end of the trench. Contamination at this area was at the saturation point and ran from approximately three (3') feet to where the excavation was halted at this point. The pit area and stockpile was cordoned off with caution tape and the stockpile covered.

Upon completion of covering the stockpile, a local resident from the Farmers Market passed by the site and gave Ken Garrett some history concerning the site. The gentlemen explained that during the 1930's the site contained a home heating oil distributor who sold mainly stove oil, kerosene and Bunker "C" type products. In later years the site was used as a variety of gas stations. To his knowledge, in the past thirty years, the site has never had any tanks removed from it.

On Tuesday, April 15, 1997, Environmental Drilling Inc.(EDI) mobilized onto the site and began drilling the vertical injection points running from West to East in the gravel area between the two sidewalks located at the site. EDI hit heavy concentrations of hydrocarbon in eleven of the twelve points drilled and hit tank #2 on the eleventh well located due South of TP-3. All wells drilled in the north injection gallery along the South face of the warehouse indicated heavy hydrocarbon along the entire site. At this point temporary fencing was installed around the site to stop public entrance to the site.

After discussions with you on Monday, April 14, 1997, ETEC performed the following actions.

- Installation of 300' of temporary fencing. Cost \$603.75
- Qualified bids were received from three (3) separate tank contractors for trenching the site in line with the discovered tanks running East to West approximately 130' at 4' depth to see if

any more tanks existed and uncovering the two (2) tanks found to date. ETEC recommends the use of Joe Hall Construction for the project of trenching and uncovering.

- Installation of a monitoring well at the northwest corner of the warehouse.

Approximate Cost	\$1,753.75
------------------	------------
- Installation of the electrical system for treatment

Cost	\$684.25
Approximate Cost	\$3,335.00

Based upon the discovery of the amount of hydrocarbon in the site ETEC would recommend a revised approach to the sites to insure complete coverage of the area.

- 1.) ETEC recommends the decommissioning of the tanks in place and a revised injection gallery be instituted around each of the tanks due to the extremely high concentration of contaminants.
- 2.) As the Southern injection gallery shows extremely elevated levels of hydrocarbons, the gallery be extended Westward until the contaminate level decreases sufficiently. This would require three (3) more vertical injection points in the Southern injection gallery.
- 3.) As the Northern injection gallery shows extremely elevated levels of hydrocarbons, the gallery be extended Westward until the contaminate level decreases sufficiently. This would require three (3) more vertical injection points in the Northern injection gallery.

Brian,

This is a quick down and dirty on the site so far. I will document exact costs on everything for you in a more formal report when I get a minute. The site as you can see is far more contaminated than we originally thought but I am trying to keep the costs as low as possible. I do not think it wise to excavate any more than is required.

Respectfully,



Ken Garrett
Operations Manager

-> Top of tanks 3.5-4 feet

ATTACHMENT H

SITE DRAWINGS

Samples Results	Gas	Diesel	Oil
10/1-76-1/5	430	1,600	750
10/1-76-2/5	ND	1,900	350
10/1-76-3/5	ND	3,100	ND
10/1-76-4/5.5	ND	ND	ND
10/1-76-5/6	ND	ND	ND
10/1-76-6/5	ND	1,600	220

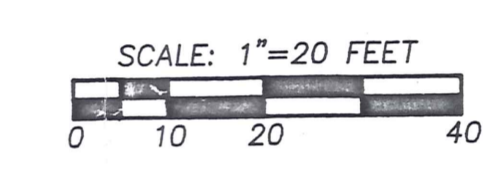
Piping Sample Results	Gas	Diesel	Oil
9/27-PS1	ND	ND	ND
9/28-PS2	ND	ND	ND
9/27-PS3	ND	ND	ND
9/28-PS4	ND	ND	210
9/27-PS5	ND	ND	500
9/28-PS6	ND	ND	320
9/28-PS7	ND	ND	540
9/27-PS8	ND	ND	ND

300 Gallon UST	Gas
NW-UST-1/5.5	ND
EW-UST-2/5.5	ND
BP-UST-3/6	ND
SW-UST-4/5.5	ND
NW-UST-5/5.5	ND

2000 Gallon UST	Gas
NUST-MW	ND
NUST-WW	ND
EW-LUST-11.5	ND
NUST-Floor	ND

Geo Design Samples	Gas	Diesel
GP-1	3,300	740
GP-2	ND	ND
GP-3	ND	ND
GP-4	ND	ND
GP-5	ND	ND
GP-6	ND	ND
GP-7	ND	ND
GP-8	ND	ND
GP-9	ND	ND
GP-10	ND	ND
GP-11	ND	ND
GP-12	ND	ND

Thurston St. Samples	Gas	Diesel
9/15 NBH-13/6.5	1,300	1,040
9/13 NBH-14/6.5	1,600	3,600



REMEDIATION EQUIPMENT LOCATION PHOENIX INN, OLYMPIA, WA

NO.	REVISIONS	BY	APPR.	DATE	DESIGNED	SCALE	JOB NUMBER
					DRAWN: JWL	HOR. 1"=20'	99-95E
					CHECKED: PJB	VERT.	DATE
					APPROVED: PJB	FIELD BOOK	6/14/99

SOUTHWEST SURVEYING, INC.
Professional Land Surveyors
116 LEE ST. S.E. SUITE A
TUMWATER, WA 98501 (360) 706-0090

DRAWING NUMBER
958WELLS.DWG
SHEET 1 OF 1

- L-A 90' biopipe 40' hard Line
- L-B 80' biopipe 50' hard Line
- L-C 75' biopipe 70' hard Line
- L-D 80' biopipe 50' hard Line
- L-E 75' biopipe 70' hard Line
- L-8A 70' biopipe 40' hard Line
- L-8B 70' biopipe 40' hard Line
- L-9 143' biopipe
- L-9A 60' biopipe
- L-1m 153' biopipe
- L-2m 84' biopipe 80' hard Line
- L-3m 80' biopipe 160' hard Line
- L-4m 60' biopipe 135' hard Line
- L-5m 62' biopipe 135' hard Line
- L-6m 64' biopipe 130' hard Line
- L-7m 64' biopipe 100' hard Line
- L-1b 90' biopipe 60' hard Line
- L-2b 84' biopipe 80' hard Line
- L-3b 80' biopipe 160' hard Line
- L-4b 60' biopipe 135' hard Line
- L-5b 62' biopipe 135' hard Line
- L-6b 64' biopipe 130' hard Line
- L-7b 64' biopipe 100' hard Line
- L-10 60' biopipe 40' hard Line

MITCA level A C 100 ppm TPH-Gx

Sample collected 9/12/99

Sample	TPH-G	TPH-D	Heavy oil
9/1-NBH-1/5	ND	ND	ND
9/1-NBH-2/5	79	1,500	ND
9/1-NBH-3/5	ND	ND	ND
9/1-NBH-4/5	ND	ND	ND
9/1-NBH-5/5	ND	ND	580
9/2-NBH-6/5	190	3,200	ND
9/2-NBH-7/5	ND	ND	ND
9/2-NBH-8/7	82	2,100	ND
9/2-NBH-9/6	88	10,000	ND
9/2-NBH-10/6.5	ND	1,100	ND



REMEDIATION EQUIPMENT LOCATION PHOENIX INN, OLYMPIA, WA

NO.	REVISIONS	BY	APPR.	DATE	DESIGNED	SCALE	JOB NUMBER
					DRAWN: JWJ	HOR. 1"=20'	99-958
					CHECKED: PJB	VERT.	DATE
					APPROVED: PJB	FIELD BOOK	6/14/99

SOUTHWEST SURVEYING, INC.
Professional Land Surveyors
116 LEE ST. S.E. SUITE 4
TUMWATER, WA 98501 (360) 736-0080

6-15-99



DRAWING NUMBER	958WELLS.DWG
SHEET 1 OF 1	

- L-A 90' biopipe 40' hard line
- L-B 80' biopipe 50' hard line
- L-C 75' biopipe 70' hard line
- L-D 80' biopipe 50' hard line
- L-E 75' biopipe 70' hard line
- L-8A 70' biopipe 40' hard line
- L-8B 70' biopipe 40' hard line
- L-9 148' biopipe
- L-9A 60' biopipe
- L-1m 150' biopipe
- L-2m 84' biopipe 80' hard line
- L-3m 80' biopipe 160' hard line
- L-4m 60' biopipe 135' hard line
- L-5m 62' biopipe 135' hard line
- L-6m 64' biopipe 130' hard line
- L-7m 64' biopipe 100' hard line
- L-1b 90' biopipe 60' hard line
- L-2b 84' biopipe 80' hard line
- L-3b 80' biopipe 160' hard line
- L-4b 60' biopipe 135' hard line
- L-5b 62' biopipe 135' hard line
- L-6b 64' biopipe 130' hard line
- L-7b 64' biopipe 100' hard line
- L-10 80' biopipe 40' hard line

MTCA Level A C 100 p/m TPH-Gx

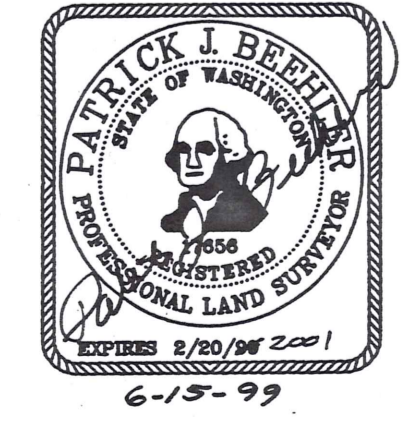


Former Unocal Site
PARK

REMEDIATION EQUIPMENT LOCATION PHOENIX INN, OLYMPIA, WA

NO.	REVISIONS	BY	APPR.	DATE	DESIGNED	SCALE	JOB NUMBER
					DRAWN: JWL	HOR. 1"=20'	99-958
					CHECKED: PJB	VERT. 1"=20'	DATE
					APPROVED: PJB	FIELD BOOK	6/14/99

SOUTHWEST SURVEYING, INC.
Professional Land Surveyors
118 LEE ST. S.E., SUITE A
TUMWATER, WA 98501 (360) 738-0090



6-15-99

DRAWING
958WE
SHEET