Recd 3/95 CM

SR
4/14/95
CM

DEPARTMENT OF ECOLOGY
NWRO/TCP TANK UNIT
INC # 2341
INTERIM CLEANUP REPORT ☑
SITE CHARACTERIZATION ☐
FINAL CLEANUP REPORT ☐
OTHER GW Monitoring ☑
AFFECTED MEDIA: SOIL ☑
OTHER ______ GW ☑
INSPECTOR (INIT.) AN DATE 10/25/94

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GROUNDWATER MONITORING REPORT
SR 522 and NE 180th Street
RIVERSIDE PROPERTY
BOTHELL, WASHINGTON

February 9, 1994

Prepared for:

Mr. Tony Palagyi
Texaco Environmental Services, Inc.
3400 188th Street S.W.,Suite 630
Kirkland, Washington 98083

Prepared by:

Groundwater Technology, Inc.
19033 West Valley Highway, Suite D-104
Kent, Washington 98032

Stan Haskins, RG
Lead Geologist

Mark E Nichols
Mark E. Nichols
Senior Project Manager/ Hydrogeologist

GROUNDWATER
TECHNOLOGY, INC.

March 4, 1994

Texaco Refining
and Marketing Inc

3400 188th Street SW
Suite 630 A
Lynnwood WA 98037

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ENV - SERVICE STATIONS
Former Texaco Service Station
SR 522 and NE 180th Street, Bothell, WA

Mr. Roger Nye
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, Washington 98008-5452

Dear Mr. Nye,

Please find enclosed one copy of the report documenting groundwater monitoring and sampling results at the referenced site in October 1993. The report was prepared by Texaco's environmental consultant, Groundwater Technology, Inc. (GTI). A total of six monitoring wells have been installed at the site. Three wells designated "A" are installed in a shallow perched water zone and did not contain sufficient water to sample in October 1993. One of the wells (MW-2A) has never contained sufficient water to sample. The other two shallow wells (MW-1A and MW-3A) were last sampled in February 1993 and did not contain petroleum hydrocarbon compounds at concentrations above MTCA Method A Compliance Cleanup levels. Both wells contained slightly elevated levels of lead in February 1993. However, these water samples were reported to be silty, and were not filtered prior to laboratory analysis, and in our opinion, are not representative of groundwater conditions at the site.

The three other wells on site are installed in a deeper confined aquifer. Results of analyses of samples collected from these wells indicated that no constituents of concern were detected above analytical method reporting limits. Based on these groundwater sampling results and on results of remediation activities conducted at the site in 1993 and documented in previous GTI reports forwarded to your office, Texaco Environmental Services requests that Ecology issue a letter stating that No Further Action (NFA) is required at the site.

If you have any questions or need additional information, please do not hesitate to contact me at (206) 774-6090, extention 227.

Sincerely,

Anthony J. Palagyi REA
Project Manager
Texaco Environmental Services

Enclosure

AJP:hws
P:\hws\tex\Wash\Rivers-L.218

LAChun-DVWatson-File-UCPFile (w/enclosures)
PNWRead (w/o enclosures)

PR: HWS

EXECUTIVE SUMMARY

Groundwater Technology, Inc. conducted groundwater monitoring and sampling at the property located near the intersection of State Route 522 and NE 180th Street in Bothell, Washington, known as the Riverside Property. The work was performed to assess the current groundwater conditions underlying the site with respect to substances regulated under the Washington Department of Ecology (WDOE) Model Toxics Control Act (MTCA). Groundwater Technology personnel gauged the depth to water in six groundwater monitoring wells and collected water samples from three (MW-1, MW-2 and MW-3). The water samples were analyzed for benzene, toluene, ethylbenzene, xylenes, total petroleum hydrocarbons-as-gasoline (TPH-G), TPH, purgeable halocarbons and dissolved lead.

- The apparent groundwater flow direction was toward the southeast at a gradient of approximately 0.05.
- Analytes tested were not detected above the MTCA Method A Compliance Cleanup Levels.

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FIGURES

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APPENDICES

GROUNDWATER MONITORING REPORT
SR 522 and NE 180TH STREET
RIVERSIDE PROPERTY
BOTHELL, WASHINGTON

February 9, 1994

1.0 INTRODUCTION

Presented in this report are the worksteps and results associated with groundwater monitoring and sampling conducted for Texaco Refining and Marketing Inc. at the Riverside Property located at State Route 522 and NE 180th Street, Bothell, Washington (See Figure 1, Site Location Map). The work was performed to assess the current groundwater conditions with respect to substances regulated under the Washington Department of Ecology (WDOE) Model Toxics Control Act[1] (MTCA). The site is owned by the City of Bothell.

2.0 SCOPE OF WORK

The following outline summarizes the specific worksteps involved:

- Gauged the depth to water in each of the six site groundwater monitoring wells;
- Purged and sampled three (MW-1, MW-2 and MW-3) of the six groundwater monitoring wells;
- Analyzed one water sample from monitoring wells MW-1, MW-2, and MW-3 for benzene, toluene, ethylbenzene, xylenes (BTEX), total petroleum hydrocarbons-as-gasoline (TPH-G), TPH, purgeable halocarbons and dissolved lead;
- Analyzed, summarized and presented the information obtained in report form.

---

[1] Washington Department of Ecology (WAC 173-340)

3.0 WELL MONITORING AND SAMPLING

On October 12, 1993 water levels were measured in groundwater monitoring wells MW-1, MW-1A, MW-2, MW-2A, MW-3, and MW-3A to evaluate groundwater flow direction and gradient. Table 1 shows the measured well-head and relative groundwater elevations in the monitoring wells. The gradient was approximately 0.05 to the southeast. Relative groundwater elevations are shown and contoured in Figure 3.

Table 1
Groundwater Monitoring Data

Well Number	MW-1	MW-1A	MW-2	MW-2A	MW-3	MW-3A
Well-Head Elevation (Feet)	101.82	101.74	101.57	101.47	100.22	100.34
Date: July 15, 1992						
DTW	8.57	7.63*	9.16	7.70*	10.02	5.63
Elevation (Feet)	93.25	94.11	94.41	93.77	90.22	94.71
Date: August 24, 1992						
DTW	9.08	7.89*	9.64	7.69*	10.29	NM
Relative Elev. (Ft)	92.74	93.85	91.93	93.78	89.93	--
Date: August 31, 1992						
DTW	9.18	7.88*	9.75	7.70*	10.32	6.59
Relative Elev. (Ft)	92.64	93.86	91.85	93.77	89.90	93.75
Date: February 25, 1993						
DTW	7.87	6.99	9.45	7.74*	9.56	4.45
Relative Elev. (Ft)	93.95	94.75	92.12	93.73	90.66	95.89
Date: October 12, 1993						
DTW	7.29	7.91*	9.72	7.19*	10.12	6.88*
Relative Elev. (Ft.)	94.53	93.83	91.85	94.28	90.10	93.46

DTW = Depth to Water
NM = Not Measured (inaccessible)
Note: Elevations are relative based on an arbitrary common datum of 100 feet.
* Not a representative groundwater elevation and insufficient water column to sample.

Following groundwater monitoring on October 12, 1993, wells MW-1, MW-2 and MW-3, which are completed in a confined aquifer below an aquitard, were purged of approximately three well volumes and water samples were collected in accordance with the Standard Operating Procedures in Appendix A. Samples collected were designated MW-1, MW-2, and MW-3 and sent to GTEL with the sample Chain-of-Custody. Wells MW-1A, MW-2A, and MW-3A, which are completed above the site aquitard, were not sampled, due to an insufficient amount of water in the wells. Purged water was treated through two 55-gallon carbon canisters connected in series prior to disposal to the ground.

4.0 LABORATORY ANALYSIS

Groundwater samples collected were analyzed at GTEL Environmental Laboratories in Concord, California. Water samples from MW-1, MW-2, and MW-3 were analyzed for BTEX and TPH-G by EPA Methods 8020 and modified 8015, TPH by WTPH 418.1, purgeable halocarbons by EPA Method 8010, and dissolved lead by EPA Method 7421. Due to turbidity levels observed during past sampling events, water samples collected for lead analysis were filtered in the field prior to acidification. This procedure is allowed under WAC 173-340-720 (8)(a)(i). Water analyses results from this and previous sampling events are summarized in Table 2. Complete laboratory results are contained in Appendix B.

TABLE 2
Analytical results BTEX, TPH-G, TPH, Lead
EPA Methods 8020, modified 8015, 418.1, 7421 and 8240 or 8010
Results in micrograms per liter (μg/L)

Well Number	Date	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-G	TPH	Lead	TCE
MW-1	July 15, 1992	<0.3	<0.3	<0.3	<0.5	<10	1,000	<5	<5
	February 25, 1993	<0.3	<0.3	<0.3	<0.5	<10	<1,000	<5	<5
	October 12, 1993	<0.3	<0.3	<0.3	<0.5	<10	<1,000	<5	<0.5
MW-1A	July 15, 1992	NS	NS	NS	NS	NS	NS	NS	NS
	February 25, 1993	<0.3	<0.3	<0.3	<0.5	<10	<1,000	56	<5
	October 12, 1993	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	July 15, 1992	<0.3	0.3	<0.3	3	200	<1,000	6	<5
	February 25, 1993	<0.3	<0.3	<0.3	<0.5	<10	<1,000	<5	<5
	October 12, 1993	1	<0.3	<0.3	<0.5	<10	<1,000	<5	<0.5
MW-2A	July 15, 1992	NS	NS	NS	NS	NS	NS	NS	NS
	February 25, 1993	NS	NS	NS	NS	NS	NS	NS	NS
	October 12, 1993	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	July 15, 1992	<0.3	<0.3	<0.3	<0.5	<10	<1,000	40	<5
	February 25, 1993	<0.3	<0.3	<0.3	<0.5	<10	<1,000	<5	<5
	October 12, 1993	<0.3	<0.3	<0.3	<0.5	<10	<1,000	<5	<0.5
MW-3A	July 15, 1992	<0.3	<0.3	<0.3	<0.5	<10	<1,000	240	110
	February 25, 1993	<0.3	<0.3	<0.3	<0.5	<10	<1,000	53	<5
	October 12, 1993	NS	NS	NS	NS	NS	NS	NS	NS
CCL		5	40	30	20	1,000	1,000	~~250~~ 5	5

MDL = Method Detection Limit
CCL = WAC-340, Model Toxics Act, Method A Compliance Cleanup Levels - Groundwater
TCE = Trichloroethene
NS = Not sampled

The only detected analyte was benzene in sample MW-2. The reported concentration, 1 microgram/Liter (μg/L), is below the MTCA Method A Compliance Cleanup Level (CCL) of 5 μg/L.

5.0 CONCLUSIONS AND RECOMMENDATIONS

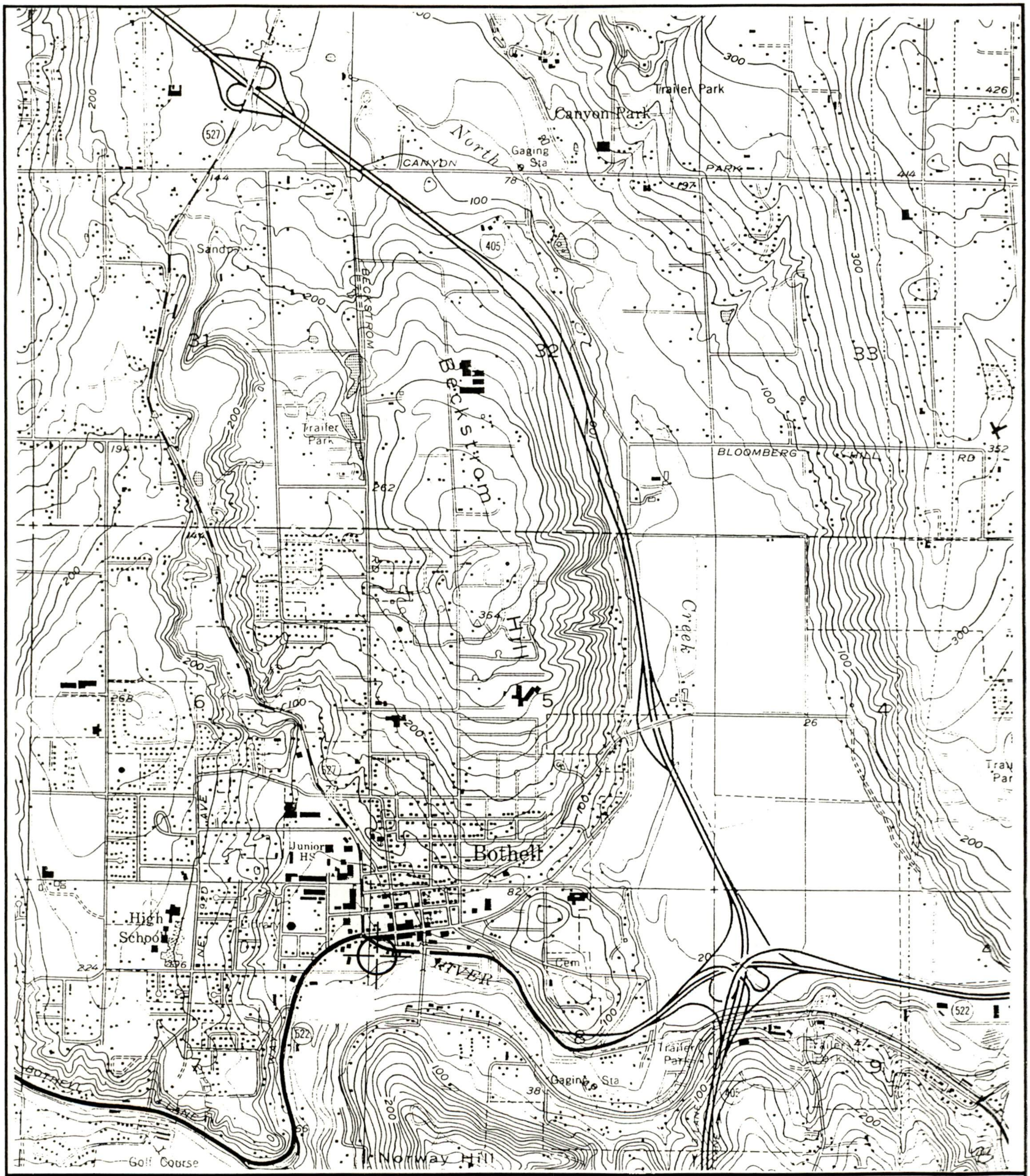
Groundwater monitoring and sampling was completed at the Riverside Property, Bothell, Washington in October, 1993. BTEX, TPH-G, TPH, dissolved lead, and purgeable halocarbon concentrations were either not-detected at the respective method detection limits or were below groundwater CCLs in samples collected from monitoring wells MW-1, MW-2, and MW-3. The apparent groundwater gradient is 0.05 to the southeast.

Two previous groundwater sampling events were conducted at the site in July, 1992 and February, 1993. Groundwater concentrations above CCLs were reported in July, 1992 in samples collected from monitoring wells MW-1 (TPH), MW-2 (lead), MW-3 (lead) and MW-3A (lead and trichloroethene (TCE)). The February, 1993 sampling event reported only lead concentrations above CCLs in monitoring wells MW-1A and MW-3A.

The last two consecutive sampling events have not detected BTEX, TPH-G, TPH, lead or TCE in concentrations above Method A CCLs in the lower aquifer. Therefore, Groundwater Technology recommends discontinuing groundwater monitoring operations at this site and petitioning the WDOE for "No Further Action" status.

FIGURES

GROUNDWATER
TECHNOLOGY



SCALE:

0 FEET 2000

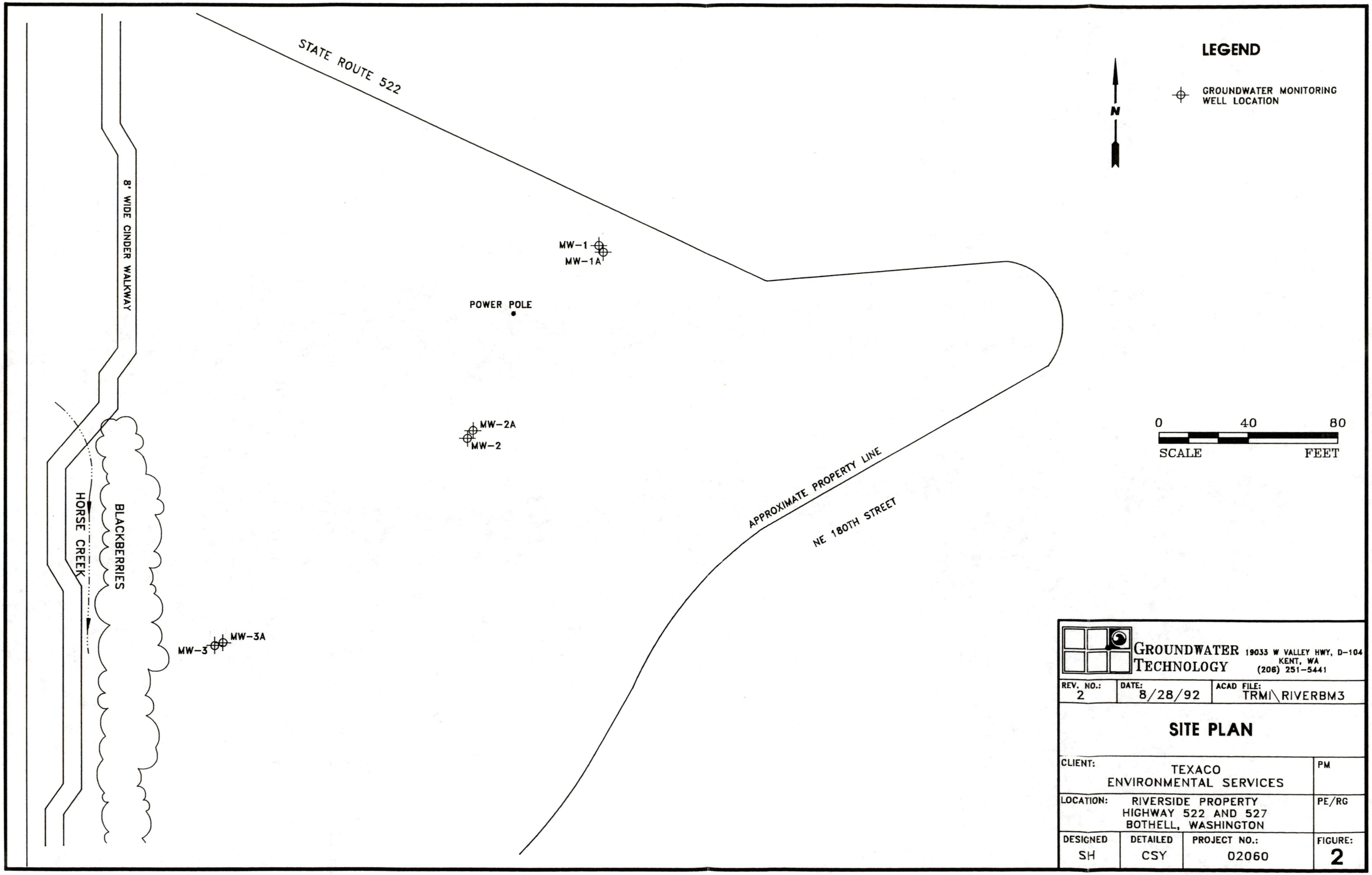
SITE LOCATION MAP

GROUNDWATER TECHNOLOGY

19033 W VALLEY HWY, D-104
KENT, WA
(206) 251-5441

N

CLIENT: TEXACO ENVIRONMENTAL SERVICES	DATE: 5/21/92
LOCATION: RIVERSIDE/SR 522 & SR 527 BOTHELL, WA	FIGURE: 1



GROUNDWATER TECHNOLOGY
19033 W VALLEY HWY, D-104
KENT, WA
(206) 251-5441

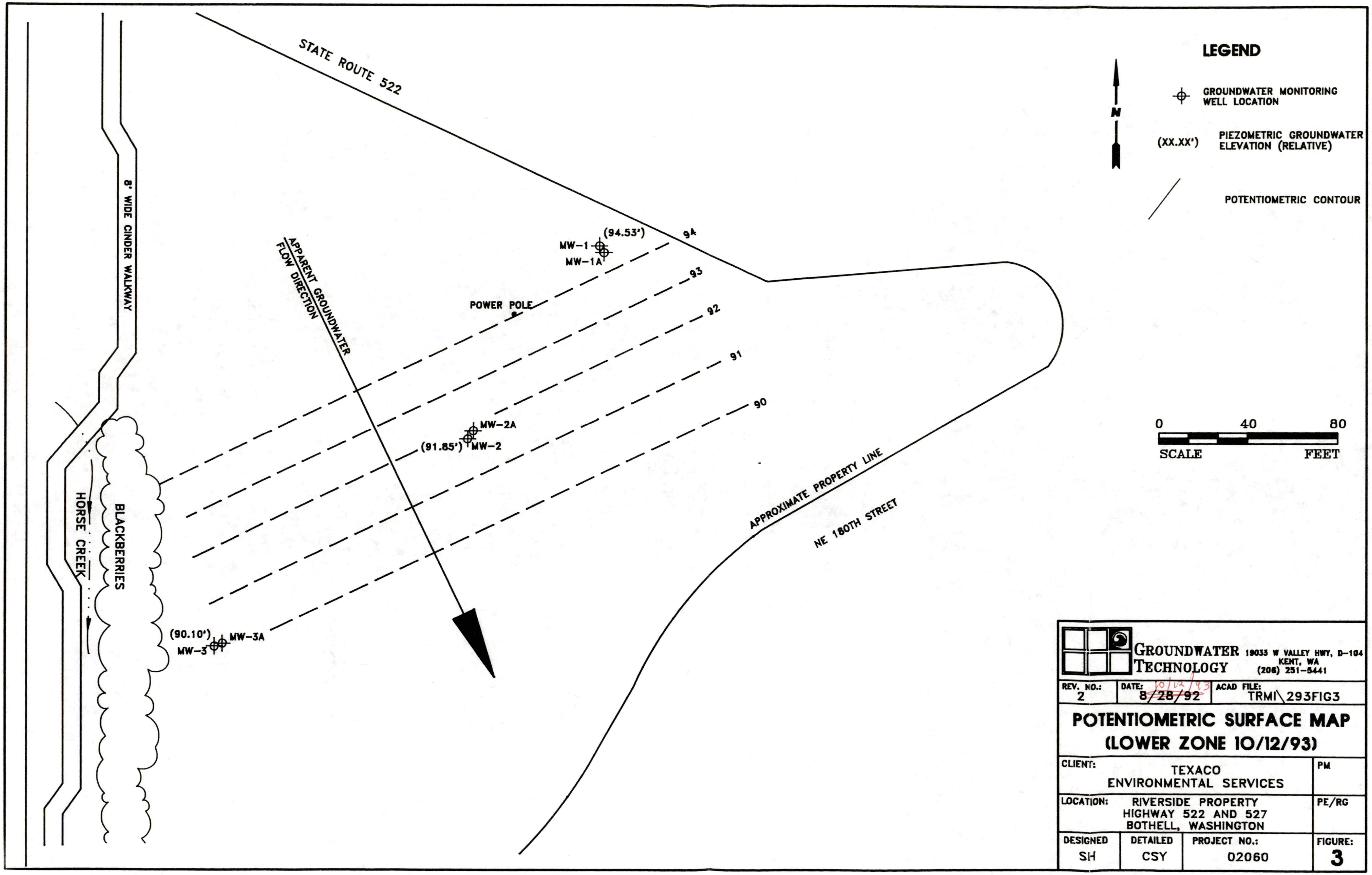
REV. NO.:	DATE:	ACAD FILE:
2	8/28/92	TRMI\RIVERBM3

SITE PLAN

CLIENT: TEXACO ENVIRONMENTAL SERVICES
PM

LOCATION: RIVERSIDE PROPERTY
HIGHWAY 522 AND 527
BOTHELL, WASHINGTON
PE/RG

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
SH	CSY	02060	2



GROUNDWATER TECHNOLOGY 19033 W VALLEY HWY, D-104
KENT, WA
(206) 251-5441

REV. NO.: 2	DATE: ~~8/28/92~~ 10/12/93	ACAD FILE: TRMI\293FIG3

POTENTIOMETRIC SURFACE MAP (LOWER ZONE 10/12/93)

CLIENT: TEXACO ENVIRONMENTAL SERVICES	PM
LOCATION: RIVERSIDE PROPERTY HIGHWAY 522 AND 527 BOTHELL, WASHINGTON	PE/RG

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
SH	CSY	02060	3

APPENDIX A
STANDARD OPERATING PROCEDURES

3.0 WATER QUALITY SAMPLING

3.1 Water samples should not be taken from the stagnant water in the well.

3.2 Water samples should be taken in triplicate.

3.3 Remove 3 to 5 volumes of water in the well prior to sampling. The water may be removed by bailing, submersible pump, or purge system. Wells with a slow recovery period should be bailed dry and then sampled within 1 hour or when recovered to 80%. Monitor pH, temperature and specific conductivity with each well volume to insure water quality stabilization has occurred. However, this is not necessary at every well or in all circumstances.

3.4 Use only Teflon, stainless steel, or glass bailers to obtain the sample. Use Teflon only for sampling water containing chlorinated compounds and also for bacteriological samples. PVC bailers can be used for one-time sampling for other than EPA 624 analysis. Using a bailer for a one-time sampling reduces the possibility for cross-contamination.

3.5 When sampling, avoid stirring up any sediments in the well and agitating the water to reduce volitization of any dissolved compounds that may be present.

3.6 All sampling equipment must be cleaned following the appropriate procedure to avoid cross contamination from site to site and sample to sample. The sampling equipment should be cleaned before each well sampling, between each sampling, and at the end of each sampling round.

3.7 Monitoring wells should be gauged prior to sampling.

3.8 If possible, the monitoring wells should be sampled starting with the cleanest well and ending with the most contaminated well.

3.9 Wells containing free-phase contaminants should not be sampled.

3.10 When filling out the chain of custody form:
- enter the samples in the order in which they were collected;
- make a note as to the cleaning fluid used to clean the sampling equipment;
- attempt to identify which samples are the most contaminated;
- complete all other requested information.

3.11 The laboratory sample identification label should be filled out with a waterproof pen and firmly affixed to each sample container. Typically, identification labels require that the following information be supplied:
- job name
- job number
- sampler's name
- sample identification
- date sampled and time
- analysis requested

3.12 Acidification is required for samples that will be analyzed by the EPA 624 method. (see Acidification Procedure in this section)

3.13 Acidification is recommended for EPA method 601 and 602 samples to preserve them and increase their holding life. (see Acidification Procedure in this section)

3.14 Field blanks should be taken as part of each sampling round. A field blank consists of a sample of distilled water which has been collected by putting the distilled water into a sampling bailer after the bailer has been cleaned following the procedure used to clean that bailer during the sampling round. The field blank is stored with the samples. It is not analyzed unless requested by the Project Manager. The field blank should not be identified as such to the laboratory.

3.15 Handling of decontaminated equipment:

- Always use "pristine" gloves (latex, solvex, etc.).
- Place decontaminated bailers on clean surface (plastic).
- Do not wipe down bailer with paper towels or cloth. Follow decontamination procedure.

3.16 Sample accuracy can be adversely affected by the entrainment of sediment in wells which have not been properly developed. Contaminants adhering to the sediments can be released when samples are acidified for preservation. Therefore, if sediments are present, field filtering of the samples is recommended.

3.17 Chemical changes can take place because the sample was oxidized during sampling. It is critical to avoid oxidation of samples when sampling for volatile organic compounds (VOC). Therefore, take care to insure minimal agitation occurs during sampling.

3.18 All samples should be <u>properly</u> and <u>promptly</u> preserved.

3.19 All samples should be analyzed quickly; arrangements should be made with the testing laboratory to insure prompt analysis is performed within the allowable times for the specific analyses to be done.

3.20 Bailer strings that have contacted water or contaminants should be replaced between each well to avoid contamination from a bailer string which has absorbed contamination. A good practice is to replace the string between wells. <u>Caution</u>: some bailer strings are treated with a fungicide which may be detected in priority pollutant analysis.

3.21 Notify laboratory that samples are being shipped in advance of sampling to insure proper delivery and turnaround.

3.22 On the chain of custody, note what type of decontamination or preservation fluids, chemicals were used.

4.0 ACIDIFICATION PROCEDURE (EPA Methods 601,602, and 624)

4.1 At the start of each sampling round, the amount of acid required to lower a sampling container of water to be sampled to a pH of less than 2 should be determined.

4.2 After removing 3 to 5 well volumes from the first well to be sampled, put 5-10 drops of 50% HCL into a 40 ml sample vial (larger sampling container will require more acid) and fill the vial with water form the well; determine the pH of water in the vial with pH paper; if the pH is too high, repeat the procedure using 15-20 drops of acid in the vial; repeat until the pH of the water in the sample vial is a pH of less than 2 on the pH paper. Note the amount of acid required to lower the pH of the volume of water in the sampling vial. (pH paper should not be placed into sampling container. Pour sample onto pH paper to check for proper pH.)

4.3 Discard the practice acidified sample.

4.4 Once the amount of acid required to reach a pH of <2 is known, the acid can be routinely added to each sample container directly; the water to be analyzed is added to vial or container containing the appropriate amount of acid.

4.5 Note that the amount of acid required is site specific and should be noted on the Chain of Custody form.

4.6 The procedure should be repeated for each site at the start of each sampling round.

4.7 Equipment

- Bailer or other means to remove 3 to 5 well volumes
- Sampling bailer
- Polyethylene squirt bottle of 50% hydrochloric (HCL) acid
- Narrow range pH paper (1.0 - 2.5 pH range)
- Paper towels
- Waterproof pen
- Laboratory sample identification labels
- Cooler with ice
- Chain of custody forms
- Sample containers (usually 40 ml glass vials with teflon faced septums)
- Alconox solution and/or methanol
- Distilled water
- Safety equipment (gloves, etc.)
- Dissolved oxygen meter (sometimes used in limited biorec projects in conjunction with bacteriological testing)

B

GROUNDWATER
TECHNOLOGY

APPENDIX B

LABORATORY ANALYTICAL RESULTS

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Suite C
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
FAX (510) 825-0720

RECEIVED OCT 28 1993

Client Number: 020603778
Project ID: Bothell, WA
Work Order Number: C3-10-0289

October 27, 1993

Mark Nichols
Groundwater Technology, Inc.
19033 W. Valley Hwy., D-104
Kent, WA 98032

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 10/13/93, under chain of custody record 27466.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Eileen F. Bullen

Eileen F. Bullen
Laboratory Director

GTEL Concord, CA
C3100289.CVL

Client Number: 020603778
Project ID: Bothell, WA
Work Order Number: C3-10-0289

Table 1

ANALYTICAL RESULTS

Dissolved Lead in Water by Graphite Furnace AA[2]

EPA Methods 7421[1]

GTEL Sample Number		01	02	03	101893 MET
Client Identification		MW1	MW2	MW3	METHOD BLANK
Date Sampled		10/12/93	10/12/93	10/12/93	--
Date Analyzed		10/18/93	10/18/93	10/18/93	10/18/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Lead, total	5	<5	<5	<5	<5
Detection Limit Multiplier		1	1	1	1

1. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, November 1986.
2. Unpreserved water sample passed through a 0.45 micron membrane and analyzed as a dissolved metal. Samples were field filtered.

Client Number: 020603778
Project ID: Bothell, WA
Work Order Number: C3-10-0289

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons in Water by Infrared Spectrometry

WTPH 418.1[1](SM 5520 FC[2])

1. Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-202, Revised March 1983, U.S. Environmental Protection Agency.
2. Standard Methods for the Examination of Water and Wastewater, 17th ed., 1989, American Public Health Association. "Modification in TPH Methods as per the state of Washington Department of Ecology, Appendix L, April, 1992."

GTEL Sample Number		01	02	03	102193 TPO
Client Identification		MW1	MW2	MW3	METHOD BLANK
Date Sampled		10/12/93	10/12/93	10/12/93	--
Date Prepared		10/20/93	10/20/93	10/20/93	10/20/93
Date Analyzed		10/20/93	10/20/93	10/20/93	10/20/93
Analyte	Detection Limit, mg/L	Concentration, mg/L			
Total Petroleum Hydrocarbons	1	<1	<1	<1	<1
Detection Limit Multiplier		1	1	1	1

Client Number: 020603778
Project ID: Bothell, WA
Work Order Number: C3-10-0289

Table 1

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Methods 8020 and WTPH-G[a]

GTEL Sample Number		01	02	03	S102293
Client Identification		MW1	MW2	MW3	METHOD BLANK
Date Sampled		10/12/93	10/12/93	10/12/93	--
Date Analyzed		10/22/93	10/22/93	10/22/93	10/22/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	1	<0.3	<0.3
Toluene	0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene	0.3	<0.3	<0.3	<0.3	<0.3
Xylene, total	0.5	<0.5	<0.5	<0.5	<0.5
BTEX, total	--	--	1	--	--
Gasoline	10	<10	<10	<10	<10
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		78.9	82.6	79.6	83.9

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. "Method in TPH Methods as per the state of Washington Department of Ecology, Appendix L, April, 1992." Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

Client Number: 020603778
Project ID: Bothell, WA
Work Order Number: C3-10-0289

Table 1
ANALYTICAL RESULTS
Purgeable Halocarbons in Water
EPA Method 8010[a]

GTEL Sample Number		01	02	03	P102593
Client Identification		MW1	MW2	MW3	METHOD BLANK
Date Sampled		10/12/93	10/12/93	10/12/93	--
Date Analyzed		10/26/93	10/26/93	10/26/93	10/25/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	1	<1	<1	<1	<1
Chloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Methylene chloride	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1	<1	<1	<1	<1
Bromoform	0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	0.5	<0.5	<0.5	<0.5	<0.5
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		83.2	98.4	92.2	83.2

a. Test Methods for Evaluating Solid Waste, SW-846, 3rd edition, Rev. 0, U.S. EPA, November, 1986. BFB surrogate recovery acceptability limits are 65-135%.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

27466

ompany Name: Ground WAter Tech.
Phone #: 206 251-5441
FAX #: 251-8452
ompany Address: 19033 W VAlley Kent. WA. 98032
Site location: Bothell, WA.
oject Manager: MArk Nichols
Client Project ID: (#) 020603778-6020
(NAME) TES-Riverside
ttest that the proper field sampling ocedures were used during the collection these samples.
Sampler Name (Print): Steve Josey

Field Sample ID	GTEL Lab # (Lab use only)	# Containers	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	UNPRESERVED	OTHER (SPECIFY)	Sampling: DATE	TIME
MW 1	01	9	X						X	X		X			10.12	2:45
MW 2	02	9	X						X	X		X			10.12	1:30
MW 3	03	9	X						X	X		X			10-12	2:15

ANALYSIS REQUEST / OTHER

Field Sample ID	BTEX/602 ☐ 8020 ☐ with MTBE ☐	BTEX/Gas Hydrocarbons PID/FID ☒ with MTBE ☐	Hydrocarbons GC/FID Gas ☐ Diesel ☐ Screen ☐	Hydrocarbon Profile (SIMDIS) ☐	Oil and Grease 413.1 ☐ 413.2 ☐ SM 503 ☐	TPH/IR 418.1 ☒ SM 503 ☐	EDB by 504 ☐ DBCP by 504 ☐	EPA 503.1 ☐ EPA 502.2 ☐	EPA 601 ☐ EPA 8010 ☒	EPA 602 ☐ EPA 8020 ☐	EPA 608 ☐ 8080 ☐ PCB only ☐	EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐	EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐	EPA 610 ☐ 8310 ☐	EP TOX Metals ☐ Pesticides ☐ Herbicides ☐	TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐	EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐	CAM Metals TTLC ☐ STLC ☐	Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐	Organic Lead ☐	Corrosivity ☐ Flash Point ☐ Reactivity ☐	Disolved LEAD		
MW 1		X				X			X													X		
MW 2		X				X			X													X		
MW 3		X				X			X													X		

TAT
iority (24 hr) ☐
xpedited (48 hr) ☐
Business Days ☐
ther ____
usiness Days ☐

Special Handling
GTEL Contact ____
Quote/Contract # ____
Confirmation # ____
PO # ____

QA / QC LEVEL
LUE ☐ CLP ☐ OTHER ____

SPECIAL DETECTION LIMITS

SPECIAL REPORTING REQUIREMENTS

FAX ☐

REMARKS
* LEAd sAmples filtered in field.

Lab Use Only Lot # 4°C
Storage Location: S1/3
Work Order # C3100289

CUSTODY RECORD

Relinquished by Sampler: Steve Josey	Date 10-12-93	Time 16:30	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 10/13	Time 10:AM	Received by Laboratory: Corinne Belskey Waybill #