Chevron U.S.A. Inc.
P.O. Box 220, Seattle, WA 98111

January 18, 1991

Mr. John O. Wietfeld
Toxics Cleanup Program
Department of Ecology
3601 W. Washington
Yakima, WA 98903-1164

Dear Mr. Wietfeld:

I am enclosing a copy of a Site Assessment Report that was prepared for Chevron's Service Station #7348, 502 N. Wenatchee Avenue, Wenatchee, Washington.

The results from sampling the soil shows no volatile organic compounds, PCB's or halogenated organics were detected. The highest TPH value detected in the soil was 17 ppm. Toxicity metals were also analyzed in the soil and only two metals were detected, barium and mercury, with levels below state cleanup levels.

The water sampling results detected the presence of benzene in two of the four wells, but below state cleanup levels. Monitoring well MW-2 detected concentrations of ethyl benzene, xylenes and TPH above state cleanup levels. Monitoring well MW-5 detected dissolved lead at a level exceeding the state cleanup levels.

The source(s) of the compounds detected is not known at present. There is a possibility that the dissolved lead concentrations may be consistent with the background concentrations found in the crystalline bedrock. The dissolved volatile organic compounds appears to be isolated and the soil samples taken from MW-2 showed no evidence of petroleum hydrocarbon constituents.

To verify the validity that the results from MW-2 is isolated and that the dissolved hydrocarbon constituents may purge themselves naturally, Chevron will be sampling the wells quarterly for 1991.

Also for your information, this station is presently closed and the facilities, including tanks and lines, are expected to be removed by June 1, 1991. Notification with the approximate date to remove the tanks and lines will be sent to the Washington State UST Coordinator.

If you have any questions, call me at (206) 628-5219.

Sincerely,

CHEVRON U.S.A. INC.

By Philip R Briggs
Philip R. Briggs
Environmental Project Manager

PRB:pj
Enclosure

REPORT OF
ENVIRONMENTAL SITE ASSESSMENT
CHEVRON SERVICE STATION # 7348
502 N. WENATCHEE AVENUE
WENATCHEE, WASHINGTON

DECEMBER, 1990

Prepared for:

Mr. Phil Briggs
Chevron U.S.A. Inc.
P.O. Box 220
Seattle, Washington 98101

Prepared by:

Groundwater Technology, Inc.
19033 W. Valley Hwy., Suite D-104
Kent, Washington 98032

Stanley C. Haskins
Geologist

Mark E. Nichols
Senior Project Manager/Hydrogeologist

GROUNDWATER TECHNOLOGY, INC.

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

APPENDIX I	DRILL LOGS
APPENDIX II	STANDARD OPERATING PROCEDURES
APPENDIX III	LABORATORY ANALYTICAL RESULTS - SOIL
APPENDIX IV	LABORATORY ANALYTICAL RESULTS - GROUNDWATER
APPENDIX V	SYNOPSIS OF INVESTIGATION

EXECUTIVE SUMMARY

Groundwater Technology, Inc. was contracted to preform an environmental site assessment at Chevron U.S.A. Inc. service station #7348 in Wenatchee, Washington. The purpose of the site activity was to assess for the presence and concentrations of petroleum hydrocarbons in the subsurface sediments and groundwater. Tasks performed to obtain this information included: 1) a general hydrogeologic site review; 2) drilling and sampling of five (5) borings; 3) installation and sampling of four (4) groundwater monitoring wells; 4) quantitative chemical analysis of the soil and water samples collected; 5) interpretation of the analyses; and 6) compilation of the data for this report. The on-site field work was conducted from November 7 through November 14, 1990.

Observations and findings:

- Materials observed underlying the site are sand to a depth of approximately 21-25 feet overlying crystalline bedrock to the depth drilled of 50 feet.

- Groundwater was encountered at approximately 19 feet below grade level in three (3) of the five (5) borings.

- Laboratory test results for benzene, toluene, ethylbenzene, xylenes (BTEX) and total petroleum hydrocarbons (TPH)-as-gasoline of soil samples collected from the borings were non-detectable. Laboratory analyses by EPA Method 418.1 detected TPH concentrations ranging from 5 to 17 parts per million (ppm) in the soil samples from the borings.

- Soil samples from the boring near the previous used-oil tank location were analyzed for polychlorinated biphenyls (PCB) and halogenated volatile organics, and the results were non-detectable.

- Laboratory analysis for BTEX, TPH-as-gasoline, and TPH by EPA Method 418.1 of groundwater samples collected from the monitoring wells detected 8.6 parts per million (ppm) TPH-as-gasoline and 2.0 ppm TPH for MW-2.

The Report of Environmental Site Assessment addresses the purpose and scope of work, site setting, soil borings, monitoring wells, hydrogeologic system, and contains appendices with standard operating procedures, drill logs, and laboratory reports.

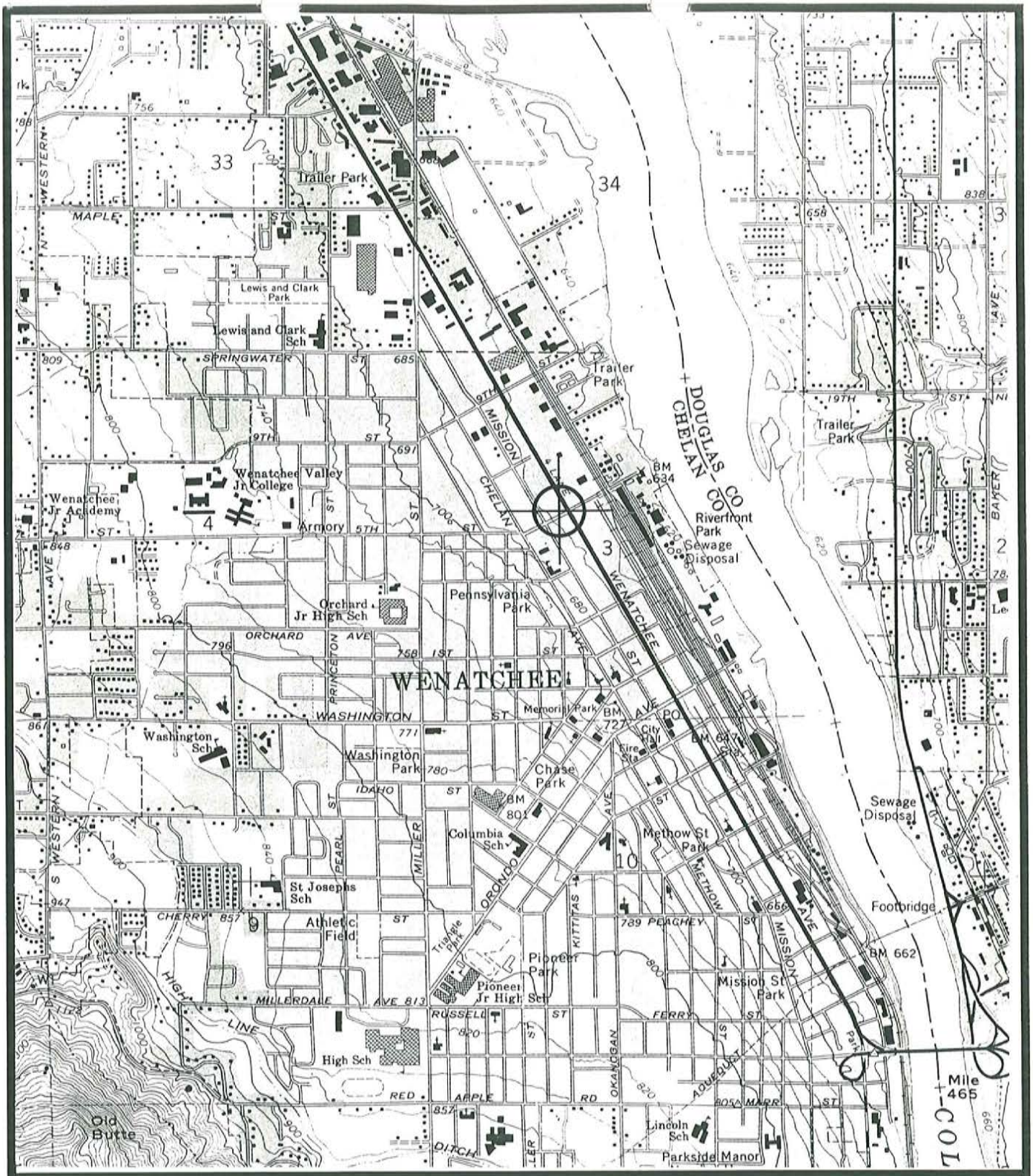
REPORT OF
ENVIRONMENTAL SITE ASSESSMENT
CHEVRON SERVICE STATION # 7348
502 N. WENATCHEE AVENUE
WENATCHEE, WASHINGTON

INTRODUCTION

This report presents the work-steps and findings of an environmental site assessment conducted at Chevron U.S.A. Inc. service station #7348, located at 502 N. Wenatchee Avenue, Wenatchee, Washington (See Figure 1, Site Location Map). The work-steps conducted during the site assessment consisted of monitoring well installation, collection and analyses of soil and groundwater samples, and an investigation of the local hydrogeologic conditions.

PURPOSE AND SCOPE OF WORK

The purpose of the investigation was to assess the subsurface soil and groundwater for the presence of petroleum hydrocarbons, and if present, preliminarily define the extent. This was accomplished by drilling five (5) borings and installing four (4) groundwater monitoring wells on the site. The site assessment was initiated by Chevron U.S.A. Inc in order to obtain information on the current site conditions. The field work associated with the assessment was conducted from November 7 through November 14, 1990.



SITE LOCATION

0 MILES 1

APPROX. SCALE

REFERENCE USGS 7.5' QUADRANGLE WENATCHEE

SITE: CHEVRON U.S.A. INC. SERVICE STATION #7348			JOB # 201 175-3006
SITE LOC.: 502 N. WENATCHEE WENATCHEE, WA			DWG NAME 3006SLM
MAP TYPE: SITE LOCATION MAP			
DRAWN BY	DATE 12/4/90	APPROVED BY	DATE

FIGURE 1

GROUNDWATER TECHNOLOGY, INC.

The following outline summarizes the specific work-steps involved.

- Drilled and sampled five (5) borings.
- Installed, developed and sampled four (4) groundwater monitoring wells.
- Analyzed two (2) soil samples from each boring for total petroleum hydrocarbons (TPH)-as-gasoline and TPH by EPA Method 418.1.
- Analyzed two (2) soil samples from four (4) borings for benzene, toluene, ethylbenzene and xylenes (BTEX).
- Analyzed two samples from the soil boring drilled near the used-oil underground storage tank (UST), MW-5 for polychlorinated biphenyls (PCB), halogenated volatile organics, and EP toxicity metals.
- Analyzed one (1) groundwater sample from each monitoring well for BTEX, TPH-as-gasoline, TPH by EPA Method 418.1, and lead.

SITE SETTING

The site is located in the northwest quarter of Section 3, Township 22 North, Range 20 East, Chelan County, Washington. Topographically, the station is approximately 650 feet above Mean Sea Level and 30 feet above the Columbia River, which lies approximately 1,000 feet to the east. Wenatchee Avenue is a four-lane street through the main commercial district of town; the station sits on the northwest corner of its intersection with 5th Street.

Surrounding properties include an active service station across 5th Street and an abandoned service station across Wenatchee Avenue. Run-off from the site appeared to be to the south and east toward 5th Street and Wenatchee Avenue, respectively.

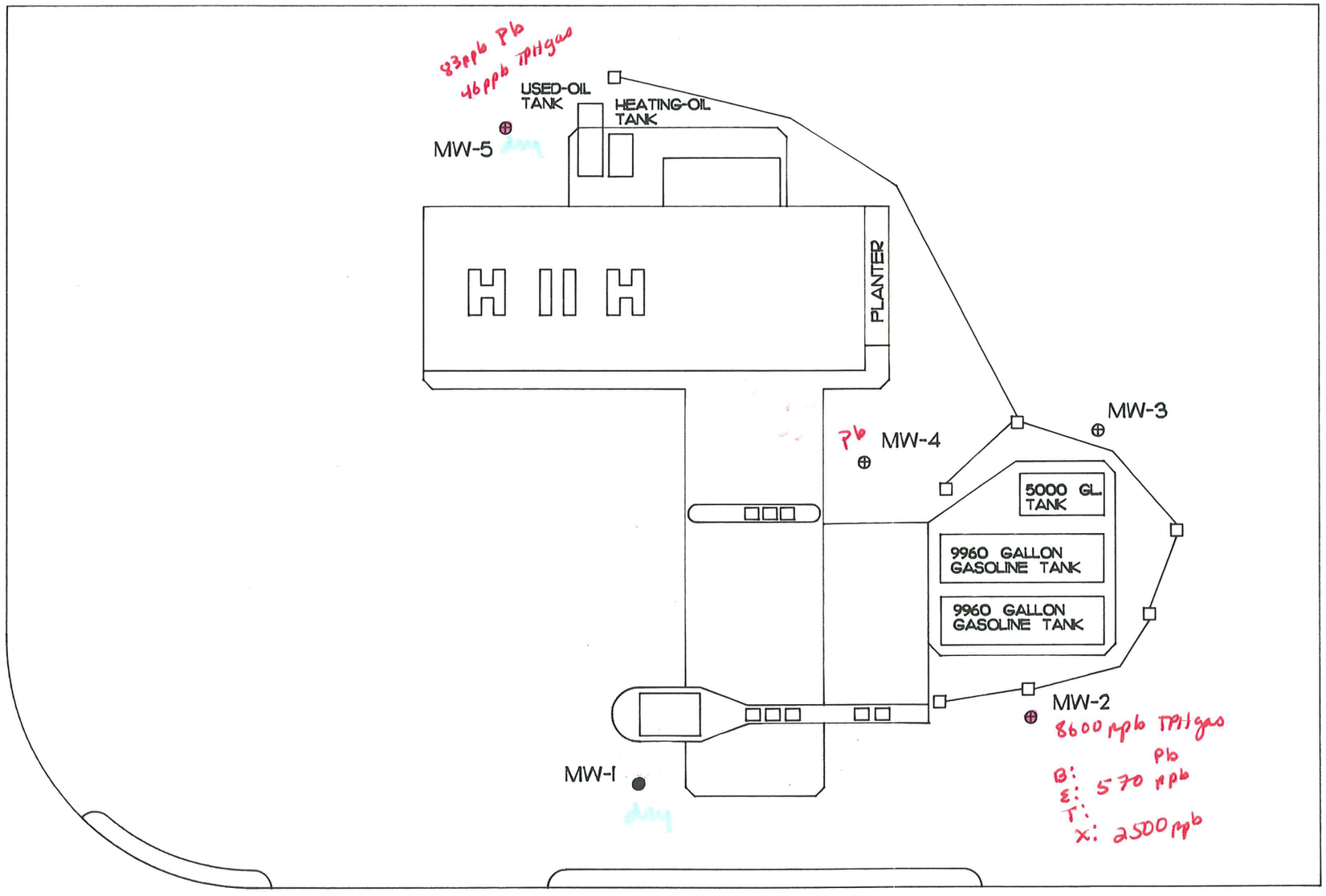
DRILLING AND SOIL SAMPLING

In order to assess for the presence of hydrocarbons in the soil and groundwater beneath the site, five (5) borings were drilled and four (4) groundwater monitoring wells installed between November 8 and 12, 1990 (See Figure 2, Site Plan). The borings were drilled with truck mounted, air-rotary equipment, by Ponderosa Drilling of Spokane, Washington. The drilling program was dictated by the lithology encountered, which consisted of brown fluvial sand with some silt and gravel from the surface to approximately 23 feet and grey crystalline rock to the depth penetrated of 50 feet. A 10-inch diameter hole was drilled to 15 feet with a tri-cone rock bit and then 10 inch casing driven and set at approximately 19 feet. At this point, an 8 inch tri-cone bit, was used to drill from 15 feet to the top of the crystalline rock, which varied from 21 to 26 feet. If water was not encountered, an 8 inch button bit and the air-hammer were used to drill the crystalline unit to a depth of 50 feet. A geologist supervised the drilling and maintained a log of the materials encountered in accordance with the Unified Soil Classification System (See Appendix I, Drill Logs). All materials generated during drilling operations were placed in Department of Transportation (DOT)-approved, 55-gallon drums, and left on-site pending the laboratory analyses results.

Soil samples from the fluvial sediments were collected using a 3-inch inside diameter split barrel sampler. Crystalline rock samples were collected directly from the cyclone, an air-cuttings separator, as drilling continued. Samples were collected at approximately 5-foot intervals in each boring beginning at 5 feet below grade level to the depth of exploration. The collected samples were screened in the field by headspace measurement for volatile hydrocarbons using a flame ionizing detector (FID) and the results noted on the drill logs. As the FID is a qualitative instrument, selected samples were submitted for laboratory analysis. Standard preservation procedures for handling and shipping were followed, including the enclosure of a chain-of-custody for each sample sent to the laboratory. All laboratory analyses were conducted by GTEL Environmental Laboratories, Inc., Concord, California, an EPA-certified laboratory. All drilling and soil sampling activities were

LEGEND

- ⊕ MONITORING WELL
- ● SOIL BORING
- □ CATHODIC PROTECTION



N

0 20

APPROX. SCALE

REV	REVISION	DATE	BY
A			

DRAWING NAME: \3006BM

SITE: CHEVRON U.S.A. INC. SERVICE STATION #7348

SITE LOC: 502 N. WENATCHEE AVE. WENATCHEE, WASHINGTON

MAP TYPE: SITE PLAN

JOB #: 201-175-3006

DRAWN BY: SCH

DATE: 11/30/90

APPROVED BY

DATE

FIGURE 2

GROUNDWATER TECHNOLOGY INC.

19033 W. VALLEY HWY.
SUITE D-104
KENT, WA. 98032
206-251-5441

conducted in accordance with the appropriate Standard Operating Procedures (SOP) presented in Appendix II.

Borings MW-1 and MW-5 had dry surface sediments and were continued into the crystalline rock to a depth of 50 feet. Drill cuttings from MW-5 became moist during drilling for approximately 1 minute, less than 1 foot in depth, at a depth of approximately 46 feet. Boring MW-1 remained dry to a depth of 50 feet and was backfilled with bentonite to 4 feet below grade and concrete poured to surface. Borings MW-2, MW-3, and MW-4 encountered water at approximately 19 feet below grade and were terminated in the top of the crystalline unit at approximately 25 feet.

GROUNDWATER MONITORING WELLS

Upon completion of drilling operations, a groundwater monitoring well was installed in borings MW-2 through MW-5, before moving the drilling equipment to the next location. The wells were constructed of 4-inch diameter, schedule 40, PVC well screen (0.020-inch machine slotted) and blank casing. The wells were completed at the drilled depth, with 20 feet of well screen and blank to surface. The annulus of each well was filled with a silica sand well-pack to a depth of 2 feet above the screen; and with a bentonite seal to approximately 2 feet below grade. Seven feet of bentonite was placed in well MW-5 to isolate the deeper water zone from the surface sediments. Each well was completed to grade with a traffic-rated vault and locking cap to provide access and security. Individual well construction details are illustrated on the drill logs in Appendix I. Subsequent to installation, wells MW-2, 3, and 4 were developed by surging and hand bailing approximately 4 well volumes of water, in order to enhance the hydraulic connection with the water-bearing zone. Monitoring well MW-5 had only accumulated approximately 1 gallon of water after 48 hours; therefore, only one-half gallon was bailed and the well let stand until sampled.

On November 12, 1990, a groundwater sample was obtained from each monitoring well. Prior to sampling, wells MW-2, MW-3 and MW-4 were purged of approximately 2 well volumes and then allowed to stabilize for one (1) hour. Samples were then collected using a teflon bailer and preserved for transport following the Standard Operating Procedures included in Appendix II. All water produced during development and sampling operations was stored in DOT approved, 55-gallon drums, and left on site pending laboratory analyses. On November 14, 1990, MW-2 through MW-5 were monitored for depth to water and additional water samples collected for lead analysis.

LABORATORY ANALYSES

Soil samples from borings (MW-1 through MW-4) were analyzed for BTEX and TPH-as-gasoline by EPA Methods 8020 and modified 8015. The analytical methods (EPA 8020 and modified 8015) are primarily solvent extraction of volatile components from the sample, and gas chromatography analysis using a photoionizing detector for quantification of aromatic hydrocarbons and a flame ionizing detector for volatile total petroleum hydrocarbons. The method detection limits (MDL's) for the methods used are: 0.005 parts per million (ppm) for benzene, toluene and ethylbenzene; 0.015 ppm for total xylenes (meta-, para- and ortho-); and 1.0 ppm for TPH-as-gasoline.

Two (2) soil samples from borings MW-1 through MW-4, one from approximately 10 feet below grade and one from just above the water table, were analyzed for BTEX, TPH-as-gasoline, and TPH by EPA Method 418.1. Two (2) samples from MW-5, located near the used oil tank were analyzed for TPH by EPA Method 418.1 and TPH-as-gasoline by modified EPA Method 8015. No samples from boring MW-5 were analyzed for BTEX. Analyses results for BTEX and TPH-as-gasoline were non-detectable (ND) in all samples. Analyses results for TPH by 418.1 ranged from 8 to 17 ppm. The analyses results along with sample numbers and approximate collection depths are presented in Table A.

TABLE A

Results of Laboratory Analyses
Soil Samples from Borings
EPA Methods 8020 and Modified 8015

(Results in parts per million)

Sample I.D.	Sampling Depth	Benzene	Toluene	Ethylbenzene	Xylenes	TPH–as–Gasoline	TPH–418.1
	MDL*	0.005	0.005	0.005	0.015	1	5
MW–1B	10.0–10.5	ND**	ND	ND	ND	ND	8
MW–1C	16.0–16.5	ND	ND	ND	ND	ND	10
MW–2B	10.0–10.5	ND	ND	ND	ND	ND	17
MW–2D	21.0–21.5	ND	ND	ND	ND	ND	13
MW–3B	10.0–10.5	ND	ND	ND	ND	ND	14
MW–3D	21.0–21.5	ND	ND	ND	ND	ND	15
MW–4B	10.0–10.5	ND	ND	ND	ND	ND	13
MW–4D	20.0–20.5	ND	ND	ND	ND	ND	13
MW–5A	10.0–10.5	NA***	NA	NA	NA	ND	NA
MW–5B	10.5–11.0	NA	NA	NA	NA	NA	12
MW–5D	20.0–21.0	NA	NA	NA	NA	ND	10

*MDL = Method Detection Limit
**ND = Non–Detectable
***NA= Not Analyzed

Two (2) samples from borings MW-5, MW-5B and MW-5D, were analyzed for polychlorinated biphenyls (PCB) by EPA Method 8080 (MDL is 0.1 ppm), halogenated volatile organics by EPA Method 8010 (see Appendix III for analyte MDL's), and Extraction Procedure Toxicity Metals by EPA Methods 6000 and 7000 series. The concentration levels were non-detectable in all samples, except for barium concentrations of 0.12 and 0.03 ppm. Complete laboratory reports of all soil analyses are included in Appendix III. Tables B, C and D present the results of PCB, halogenated volatile organic and extractable metals analyses, respectively.

The groundwater samples from monitoring wells MW-2, MW-3, MW-4, and MW-5 were analyzed for BTEX and TPH-as-gasoline by EPA Method 8020 and modified 8015, TPH by EPA Method 418.1 and for lead by EPA Method 7421. The laboratory analyses detected TPH-as-gasoline concentrations ranging from 0.046 to 8.6 ppm for the samples from wells MW-5 and MW-2, respectively. A TPH concentration of 2.0 ppm was detected for the sample from well MW-2 by EPA Method 418.1. Lead was detected in the samples from wells MW-2, MW-4 and MW-5 at concentrations ranging from 0.005 to 0.083 ppm. The analyses results are presented in Table E (Complete laboratory reports on all water analyses are included in Appendix IV).

HYDROGEOLOGY

Two distinctive units were encountered during drilling at the service station site; a fluvial sand underlain by a crystalline bedrock unit. The contact between the two varies from abrupt to gradational. The gradational interval consists of weathered, but consolidated, crystalline rock and is 1 to 5 feet thick at a depth of approximately 21 to 26 feet.

Water was found in wells MW-2, MW-3, and MW-4 isolated on top of the crystalline unit in the fluvial sand. The water level was measured on November 14, 1990 in each well; data is shown in Table F and a Potentiometric Surface Map is shown is Figure 3. The measured water levels were at approximately 20 to 21 feet below grade. This depth in

TABLE B

Analytical Results
Polychlorinated Biphenyls in Soil
EPA Method 8080
(Results in parts per million)

Sample I.D.		MW-5B	MW-5D				
Sample Depth		10.5-11'	20-20.5'				
Analyte	MDL*	CONCENTRATION					
PCB-1016	0.1	ND	ND				
PCB-1221	0.1	ND	ND				
PCB-1232	0.1	ND	ND				
PCB-1242	0.1	ND	ND				
PCB-1248	0.1	ND	ND				
PCB-1254	0.1	ND	ND				
PCB-1260	0.1	ND	ND				
Detection Limit Multiplier		1	1				

* MDL = Method Detection Limit
** ND = Non-detectable at MDL

TABLE C

Analytical Results
Halogenated Volatile Organics in Soil
EPA Method 8010
(Results in parts per miilion)

Sample I.D.		MW-5A	MW-5D				
Sample Depth		10-10.5'	20-20.5'				
Analyte	MDL*	CONCENTRATION					
Chloromethane	0.5	ND	ND				
Bromomethane	0.5	ND	ND				
Vinyl chloride	1	ND	ND				
Chloroethane	0.5	ND	ND				
Methylene chloride	0.5	ND	ND				
1,1-Dichloroethene	0.2	ND	ND				
1,1-Dichloroethane	0.5	ND	ND				
trans-1,2-Dichloroethene	0.5	ND	ND				
Chloroform	0.5	ND	ND				
1,2-Dichloroethane	0.5	ND	ND				
1,1,1-Trichloroethane	0.5	ND	ND				
Carbon tetrachloride	0.5	ND	ND				
Bromodichloromethane	0.5	ND	ND				
1,2-Dichloropropane	0.5	ND	ND				
cis-1,3-Dichloropropene	0.5	ND	ND				
Trichloroethene	0.5	ND	ND				
Dichlorodifluoromethane	0.5	ND	ND				
Dibromochloromethane	0.5	ND	ND				
1,1,2-Trichloroethane	0.5	ND	ND				
trans-1,3-Dichloropropene	0.5	ND	ND				
2-Chloroethylvinyl ether	1	ND	ND				
Bromoform	0.5	ND	ND				
Tetrachloroethene	0.5	ND	ND				
1,1,2,2-Tetrachloroethane	0.5	ND	ND				
Chlorobenzene	0.5	ND	ND				
1,2-Dichlorobenzene	0.5	ND	ND				
1,3-Dichlorobenzene	0.5	ND	ND				
1,4-Dichlorobenzene	0.5	ND	ND				
Trichlorofluoromethane	0.5	ND	ND				
Detection Limit Multiplier		1	1				

* MDL = Method Detection Limit
* ND = Non-detectable at MDL

GROUNDWATER TECHNOLOGY, INC.

TABLE D

Analytical Results
Extraction Procedure Toxicity Metals
in Soil
(Results in parts per million)

Sample I.D.			MW-5B	MW-5D			
Sample Depth			10.5-11'	20-20.5'			
Analyte	Method	MDL*	EXTRACT CONCENTRATION				
Arsenic	EPA 6010	1	ND	ND			
Barium	EPA 6010	0.02	0.12	0.03			
Cadium	EPA 6010	0.02	ND	ND			
Chromium, total	EPA 6010	0.02	ND	ND			
Lead	EPA 6010	0.1	ND	ND			
Mercury	EPA 7470	0.0002	ND	0.0002			
Selenium	EPA 6010	1	ND	ND			
Silver	EPA 6010	0.5	ND	ND			
Detection Limit Multiplier			1	1			

* MDL = Method Detection Limit
** ND = Non-detectable at MDL

TABLE E

Results of Laboratory Analyses
Water Samples from Monitoring Wells
EPA Methods 8020, Modified 8015,
and 418.1 and 7421
(Results in parts per million)

Well Number		Benzene	Toluene	Ethylbenzene	Xylenes	TPH–as–Gasoline	TPH–418.1	Lead
	MDL*	0.0003	0.0003	0.0003	0.0006	0.001	1	0.005
MW–2		0.001	0.009	0.570	2.5	8.6	2.0	0.005
MW–3		ND**	ND	ND	ND	0.090	ND	ND
MW–4		ND	ND	ND	ND	ND	ND	5
MW–5		0.002	0.0004	ND	0.001	0.046	ND	0.083

* MDL = Method Detection Limit
** ND = Non–Detectable

TABLE F

GROUNDWATER MONITORING DATA
November 14, 1990

Well No.	Casing Elev. (ft.)*	DTW	Water Elev. (ft.)**
MW-2	97.53	20.31	77.22
MW-3	99.02	21.63	77.39
MW-4	98.50	21.12	77.38
MW-5	99.30	47.85	51.45

* Elevations are relative to an arbitrary datum
** DTW = Depth to Water (ft.)

LEGEND

⊕ MONITORING WELL

● SOIL BORING

(XX) DATUM (FEET)

GROUNDWATER CONTOUR

APPROXIMATE LOCATION OF PERMEABILITY BARRIER

DRY ABOVE CRYSTALLINE ZONE

MW-5 ⊕

PLANTER

MW-3 ⊕ (77.39) — 77.40

MW-4 ⊕ (77.38)

77.30

MW-2 ⊕ (77.22) — 77.20

MW-1 ●

DRY

FIFTH STREET

N. WENATCHEE AVE.

N

0 20

APPROX. SCALE

REV	REVISION	DATE	BY
A			

DRAWING NAME: \3006BM

SITE: CHEVRON U.S.A. INC.
SERVICE STATION #7348

SITE LOC.: 502 N. WENATCHEE AVE.
WENATCHEE, WASHINGTON

MAP TYPE: GROUNDWATER POTENTIOMETRIC
SURFACE MAP (11/14/90) (ARBITRARY DATUM)

JOB #: 201-175-3006

DRAWN BY: SCH

DATE: 11/30/90

APPROVED BY

DATE

FIGURE 3

GROUNDWATER TECHNOLOGY INC.

19033 W. VALLEY HWY.
SUITE D-104
KENT, WA. 98032
206-251-5441

MW-1 and MW-5 is comprised of the impermeable weathered unit and water was not observed. The observed gradient is northeast at approximately 0.37 feet per 100 feet or 19.5 feet per mile. Groundwater use in the area is extremely limited; no producing water wells exist, according to the Department of Ecology, within 1/2 mile of the site. The City of Wenatchee obtains its water from wells located approximately 7 miles north of town.

CONCLUSIONS

The results of the subsurface site assessment identified no actionable concentrations of petroleum hydrocarbons, halocarbons, metals or PCB's in soil samples obtained during the investigation. However, dissolved hydrocarbons and total lead concentrations were detected which exceed WDOE Compliance Clean-up Levels (CCL) adopted December 4, 1990. A total dissolved lead level of 0.083 ppm which exceeds the CCL of 0.005 ppm was detected in MW-5. Ethylbenzene, xylenes, and TPH at concentrations 0.570, 2.5 and 8.6 ppm, respectively, were detected in MW-2. The respective CCL for these compounds are ethylbenzene - 0.02 ppm, xylenes - 0.02, and TPH - 1.0 ppm. Dissolved hydrocarbons were detected in MW-3, but below the respective CCL.

The source or sources of the compounds detected is unknown at present. The total dissolved lead concentrations found in MW-5 although above the CCL for groundwater may be consistent with background concentrations in the crystalline bedrock.

APPENDIX I
DRILL LOGS

Soil Boring MW-1
Drilling Log

Project Chevron/Wenatchee, WA — Owner Chevron U.S.A. Inc.
Location 502 N. Wenatchee Ave. — Project Number 201 175 3006
Date Drilled 11/11/90 — Total Depth of Hole 50.0 ft. — Diameter 10 & 8 in.
Surface Elevation ____ — Water Level Initial ____ — 24-hour ____
Screen: Dia ____ — Length ____ — Slot Size ____
Casing: Dia ____ — Length ____ — Type ____
Filter Pack Material ____
Drilling Company Ponderosa Drilling — Drilling Method Air rotory
Driller Louie Hanner — Log by , S. Haskins
Geologist/Engineer ____ — License No ____

See Site Map For Boring Location

NOTES:
Split barrel samples were collected to 20.0'and cyclone grab samples to 50'.

Split samples taken by hydraulic press not hammer.

Depth (feet)	Well Completion	PID (ppm)	Sample	Graphic Log	Soil Class	Description (Color, Texture, Structure)
0						8 inches of asphaltic concrete
2						Brown, fine grained SAND, some silt (moist, no odor)
4						
6		0	A			(grades no silt, slightly moist)
8						
10		1	B		SP	(grades dry)
12						
14						
16		5	C			(grades trace silt) 10" hole drilled to 15', set 10"casing to 19', drilled out with 8"bit.
18						
20					SS	Note: cuttings turn to chips not sand. Dark brown, well cemented SANDSTONE (dry, no odor) (Possible weathered crystalline bedrock)
		7	D			Note: Split barrel sampler would not penetrate. Grey crystalline bedrock
22						
24					BR	Drilled from 21' to 50' with a button bit and the air hammer.
26		10	E			

Soil Boring MW-1
Drilling Log

Project Chevron/Wenatchee, WA
Location 502 N. Wenatchee Ave.
Owner Chevron U.S.A. Inc.
Project Number 201 175 3006

Depth (feet)	Well Completion	PID (ppm)	Sample	Graphic Log	Soil Class	Description (Color, Texture, Structure)
26						
28						
30		103	F			
32					BR	
34						
36		41	G			
38						
40		190	H		SH	Black organic SHALE with leaf imprints.
42						Grey crystalline bedrock.
44						
46		250	I		BR	
48						
50		20	J			Backfilled boring with bentonite.
52						
54						
56						
58						

Monitoring Well MW-2
Drilling Log

Project Chevron/Wenatchee, WA — Owner Chevron U.S.A. Inc.
Location 502 N. Wenatchee Ave. — Project Number 201 175 3006
Date Drilled 11/9/90 — Total Depth of Hole 26.5 ft. — Diameter 10 & 8 in.
Surface Elevation ____ — Water Level Initial 19.5 ft. — 24-hour ____
Screen: Dia 4 in. — Length 20 ft. — Slot Size .020 in.
Casing: Dia 4 in. — Length 6.5 ft. — Type PVC
Filter Pack Material Silica sand
Drilling Company Ponderosa Drilling — Drilling Method Air rotory
Driller Doug Lane — Log by S. Haskins
Geologist/Engineer ____ — License No ____

See Site Map For Boring Location

NOTES:
Split barrel samples were collected to 21.5'and a cyclone grab sample at 25'.

Split samples taken by hydraulic press not hammer.

Depth (feet)	Well Completion	PID (ppm)	Sample	Graphic Log	Soil Class	Description (Color, Texture, Structure)
0						4 inches of asphaltic concrete
2						Brown, medium grained SAND, no gravel, no silt (dry, no odor)
4						
6		2.5	A			
8						
10		3	B		SP	(grades fine grained, trace gravel)
12						
14						
16		4	C			10" hole drilled to 15', set 10"casing to 19', drilled out with 8"bit.
18						
20		6				Encountered water 3: 10pm 11/9/90
22		70	D		SP	Grey very fine grained SAND, some silt (wet, strong hydrocarbon odor) (Possible weathered crystalline bedrock)
24					BR	Grey crystalline bedrock — Drilled from 23.5' to 26.5' with a button bit and the air hammer.
26		9	E			Installed monitoring well at 26.5 feet.

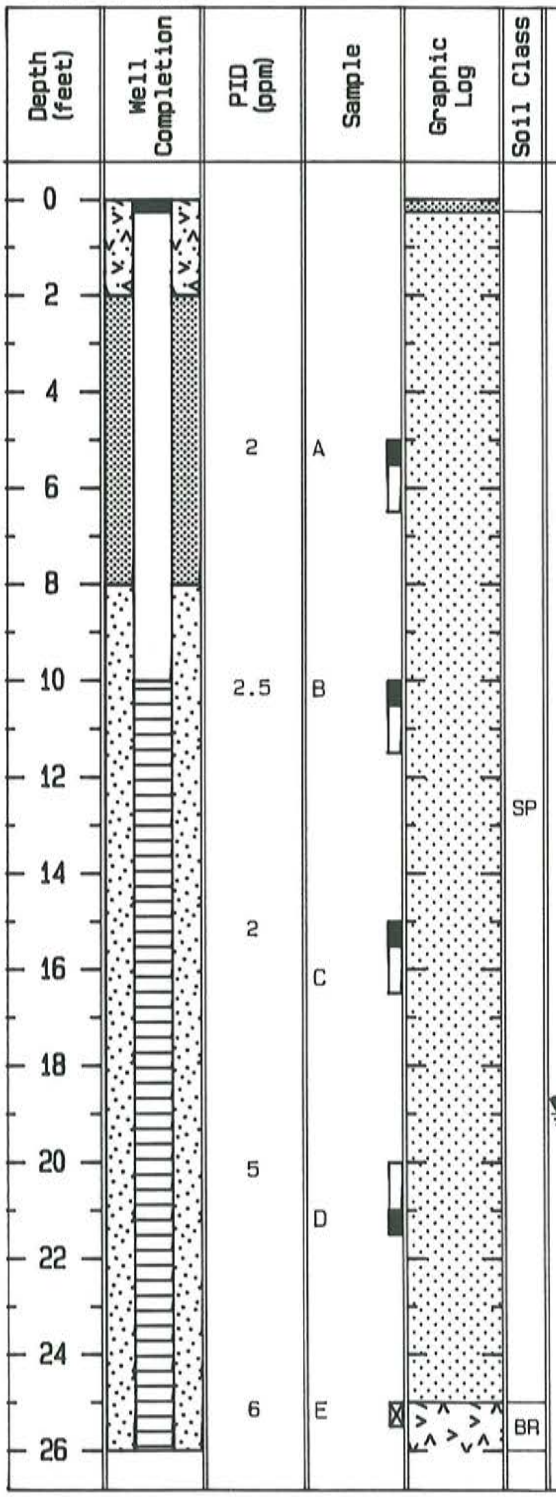
Monitoring Well MW-3
Drilling Log

Project Chevron/Wenatchee, WA — Owner Chevron U.S.A. Inc.
Location 502 N. Wenatchee Ave. — Project Number 201 175 3006
Date Drilled 11/10/90 — Total Depth of Hole 30.0 ft. — Diameter 10 & 8 in.
Surface Elevation ____ — Water Level Initial 19 ft. — 24-hour ____
Screen: Dia 4 in. — Length 20 ft. — Slot Size .020 in.
Casing: Dia 4 in. — Length 10 ft. — Type PVC
Filter Pack Material Silica sand
Drilling Company Ponderosa Drilling — Drilling Method Air rotory
Driller Doug Lane — Log by , S. Haskins
Geologist/Engineer ____ — License No ____

See Site Map For Boring Location

NOTES:
Split barrel samples were collected to 21.5'and a cyclone grab samples to 30'.

Split samples taken by hydraulic press not hammer.



Description (Color, Texture, Structure)

4 inches of asphaltic concrete

Brown, fine grained SAND, trace silt (moist, no odor)

(grades silty, very fine grained)

(grades fine grained, trace gravel, dry)

10" hole drilled to 15', set 10"casing to 19', drilled out with 8"bit.

Encountered water @10: 30am 11/10/90

Grey crystalline bedrock

Monitoring Well MW-3
Drilling Log

Project Chevron/Wenatchee, WA Owner Chevron U.S.A. Inc.
Location 502 N. Wenatchee Ave. Project Number 201 175 3006

Depth (feet)	Well Completion	PID (ppm)	Sample	Graphic Log	Soil Class	Description (Color, Texture, Structure)
26						
28					BR	Drilled from 25.0' to 30.0' with a button bit and the air hammer.
30		11	f			Installed monitoring well at 30.0 feet.
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						
52						
54						
56						
58						

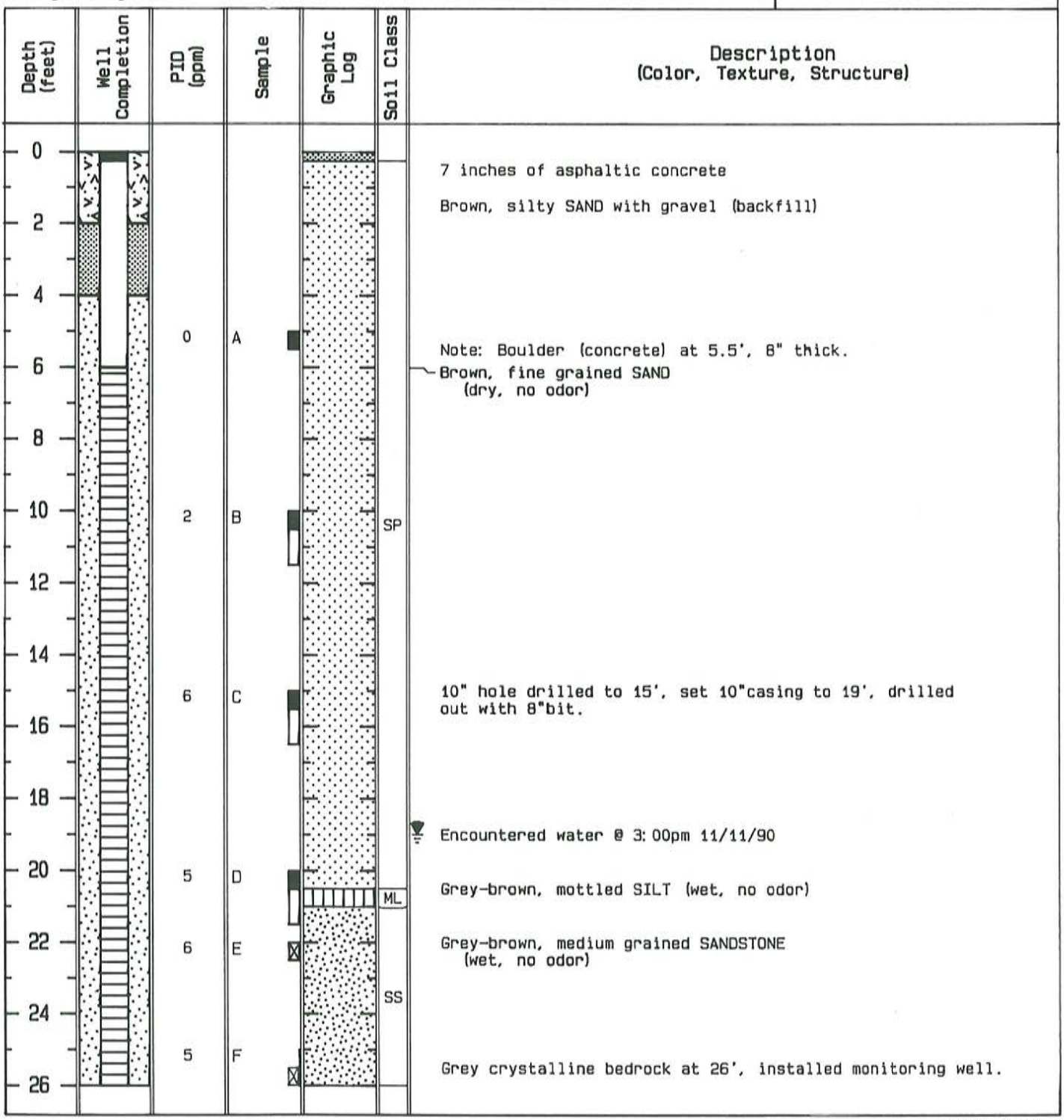
Monitoring Well MW-4
Drilling Log

Project Chevron/Wenatchee, WA — Owner Chevron U.S.A. Inc.
Location 502 N. Wenatchee Ave. — Project Number 201 175 3006
Date Drilled 11/11/90 — Total Depth of Hole 26.0 ft. — Diameter 10 & 8 in.
Surface Elevation ____ — Water Level Initial 19 ft. — 24-hour ____
Screen: Dia 4 in. — Length 20 ft. — Slot Size .020 in.
Casing: Dia 4 in. — Length 6 ft. — Type PVC
Filter Pack Material Silica sand
Drilling Company Ponderosa Drilling — Drilling Method Air rotory
Driller Louie Hanner — Log by S. Haskins
Geologist/Engineer ____ — License No ____

See Site Map For Boring Location

NOTES:
Split barrel samples were collected to 21.5'and a cyclone grab samples to 25'.

Split samples taken by hydraulic press not hammer.



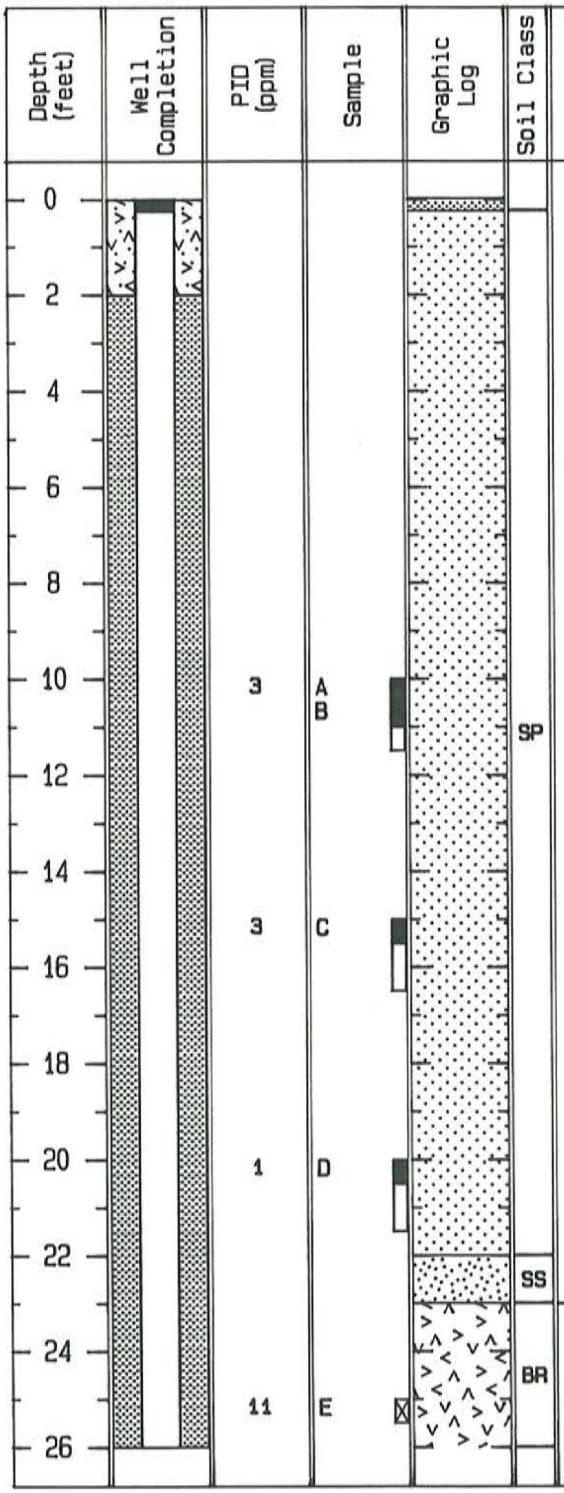
Monitoring Well MW-5
Drilling Log

Project *Chevron/Wenatchee, WA* Owner *Chevron U.S.A. Inc.*
Location *502 N. Wenatchee Ave.* Project Number *201 175 3006*
Date Drilled *11/8/90* Total Depth of Hole *50.0 ft.* Diameter *10 & 8 in.*
Surface Elevation _____ Water Level Initial *46 ft.* 24-hour _____
Screen: Dia *4 in.* Length *20 ft.* Slot Size *.020 in.*
Casing: Dia *4 in.* Length *30 ft.* Type *PVC*
Filter Pack Material *Silica sand*
Drilling Company *Ponderosa Drilling* Drilling Method *Air rotory*
Driller *Doug Lane* Log by *S. Haskins*
Geologist/Engineer _____ License No _____

See Site Map For Boring Location

NOTES:
Split barrel samples were collected to 21.5'and cyclone grab samples to 50'.

Split samples taken by hydraulic press not hammer.



Description (Color, Texture, Structure)

3 inches of asphaltic concrete

Brown, medium grained SAND, trace gravel, trace silt (dry, no odor)

Boulder, recovered only GNEISS (no odor in cuttings)

(grades fine grained)

10" hole drilled to 15', set 10"casing to 19', drilled out with 8"bit.

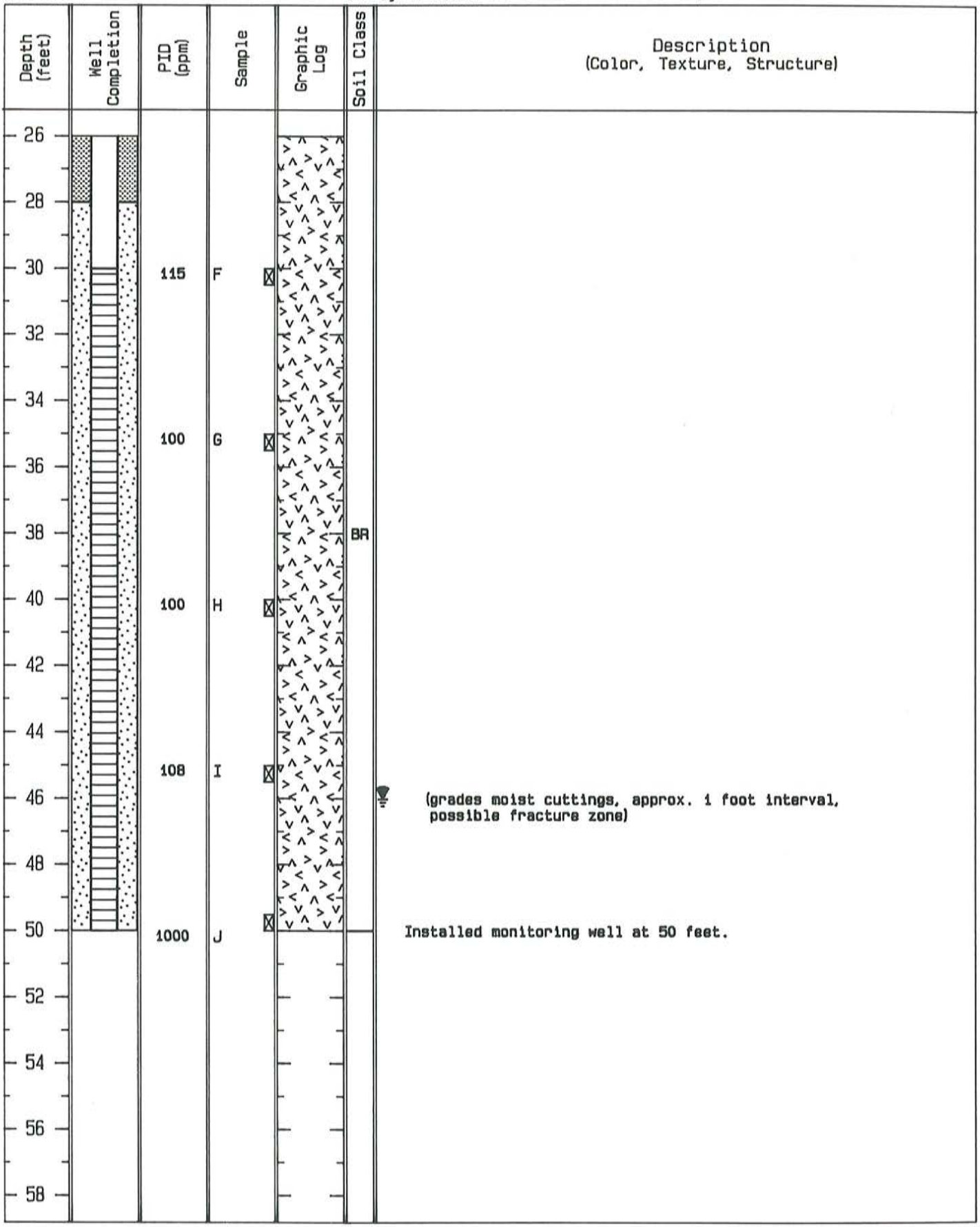
Gray very fine grained, cemented SANDSTONE (dry, no odor) (Possible weathered crystalline bedrock)

Grey crystalline bedrock

Drilled from 23' to 50' with a button bit and the air hammer.

Monitoring Well MW-5
Drilling Log

Project Chevron/Wenatchee, WA Owner Chevron U.S.A. Inc.
Location 502 N. Wenatchee Ave. Project Number 201 175 3006



APPENDIX II
STANDARD OPERATING PROCEDURES

1.0 DRILLING

1.1 The principle reason for requiring on-site drilling supervision is to acquire reliable information.

1.2 While supervising a test boring or well installation, the geologist should always make certain that the driller is making accurate depth measurements by ruler and not by visually "eyeballing" the measurements (five foot auger lengths or drill rods may vary in length by +/- .75 feet.

1.3 Discrepancies between the driller's statements of depth and the geologist's should be immediately clarified by remeasurement so that the driller and geologist are in agreement.

1.4 Note lithologic changes that occur between sampling depths. Lithologic changes can be estimated by: noting changes in the rate of penetration of the drilling tools; noting color and/or soil-type changes in the drill cuttings; and, noting the soil on the auger flights.

1.5 Samples obtained by split-spoon sampler should follow the standard penetration test procedure (see Section 2.0).

1.6 For each soil sample taken, the following information must be recorded on the well/boring log:
- sample depth
- sample number
- sampling method: split-spoon (SS), wash sample, auger flight sample, drill cutting sample.
- blow counts for every 6 inches penetration of the split-spoon sampler
- sample description should follow the Unified Soil Classification System.

1.7 The sample brass tubes must be labeled with the following information
- job number
- date and time
- well/boring number
- sample number
- sample depth
- name of sampler

1.8 Insure that samples are sealed in brass tubes as nearly intact and undisturbed as possible. Soil structure can be an important feature in interpreting the subsurface geology.

1.9 Seal the ends of the brass tubes with aluminum foil or teflon tape prior to placing on the air tight cap. Place the sealed and labeled tube on ice in a cooler for shipment to the lab along with a chain-of-custody.

1.10 Seal the contents of a second brass tube in a plastic sample bag for vapor level measurements.

1.11 Measure vapor levels with a photoionization detector (PID) when the samples reach room temperature (70 degrees F). Otherwise keep the samples cool until an instrument is available. Bring the samples to room temperature prior to measuring the vapor levels.

1.12 Attempt to determine the depth to groundwater as drilling progresses. After a well has been installed, measure the initial groundwater level. If no well has been installed, measure the water level in the boring prior to removing all of the auger flights or casing and backfilling the borehole.

1.13 When drilling in soils such as loose sands and silts, which tend to run up into the borehole, whether it is stabilized with casing or augers or not, the driller should maintain a positive head of water in the borehole (that is above the water table) at ALL times.

1.14 All pertinent data concerning drilling method, groundwater, penetration resistance, soil description, etc. should be entered onto the well/boring log.

1.15 Locate each well/boring location by taping the distances to at least three permanent physical features at the site. These may include any feature that is shown on the site plan provided, such as building corners, pump island, light standards, fences, planters, etc. DO NOT measure to another well/boring as one of the three measurements unless it is absolutely necessary. DO include measurements between well/borings as additional location information. This information, entered onto the well/boring log, will be used in conjunction with survey data to complete the site map and to generate groundwater contour and petroleum distribution maps.

1.16 At the completion of drilling, arrange to survey the well/boring locations and elevations.

1.17 Groundwater Technology does not assume the responsibility of directing the operations of independent contractors or insuring the safety of their workmen. Inform the contractor of the project requirements. Do not drive contractor trucks or operate or borrow his equipment.

1.18 Comply with all applicable articles of the Occupational Safety and Health Act of 1970, (OSHA).

2.0 STANDARD PENETRATION TEST

2.1 The standard split-spoon sampler consists of a 2-inch O.D. by 1-3/8-inch I.D., 18-inch minimum length, heat treated, case hardened, steel head, split-spoon and shoe assembly.

2.2 The head is vented to prevent pressure buildup during sampling and must be kept clean. A ball check valve is located in the head to prevent downward water pressure during sampling and sample retrieval. Removal of the water check valve often results in sample loss.

2.3 The drive rods which connect the split-spoon must have a stiffness equal or greater than an A-rod. In order to reduce rod deflection, especially in deep holes, it may be preferable to use larger diameter rods. The size of the drive rods must be consistent throughout a specific exploration as the energy absorbed will vary with the size and the weight of the rods used. The type of drive rod should be noted on the well/boring log.

2.4 The drive head consists of a guide rod to give the drop hammer a free fall in order to strike the anvil attached to the lower end of the assembly. The rod must be a minimum of 3-1/2 feet in length to insure the correct 30-inch hammer drop.

2.5 The drop hammer must weigh 140 pounds and have a 2-1/2-inch diameter hole through the center for the passage of the drive head rod.

2.6 The hammer is raised with a rope activated by the drill rig cathead. No more than two turns of rope should be allowed on the cathead.

2.7 A 30-inch free hammer drop is mandatory and extreme care should be exercised to insure consistent results.

2.8 Automatic trip hammers are available which insure a 30-inch, free-fall drop. These are recommended when retaining soil-structure data is critical, such as in liquefaction studies.

2.9 Attach the split-spoon sampler to the drill rods and lower the assembly to the bottom of the hole. Measure the drill rod stickup to determine if the bottom of the sampler is resting on the bottom of the hole. If the sampler is not on the bottom (ex. blow-up of the stratum being sampled), remove the assembly and clean out the hole to the appropriate sampling depth.

2.10 Note any penetration of the sampler/rod assembly due to the weight of the rods. Do not drop the assembly to the bottom of the hole.

2.11 Raise the 140-pound hammer 30 inches above the drivehead anvil and then allow it to drop, free-fall, and strike the anvil. This procedure is repeated until the sampler has been driven 18 inches into the stratum at the bottom of the hole (a 24-inch sampler may be driven 24 inches).

2.12 The number of blows of the hammer required for each 6 inches of penetration of the sampler is counted and recorded.

2.13 A penetration rate of 100 blows per foot is normally considered refusal; however, this criterion may be varied depending on the nature of the project and the desired information.

2.14 The penetration resistance, density, is calculated by adding together the second and the third resistance blowcounts. (Ex: for blow counts 2-6-6, density = 12.)

2.15 The sampler is then withdrawn form the borehole, preferably by pulling the rope rather than by bumping it out using the cathead and hammer in reverse.

2.16 Keeping the casing/augers/borehole full of water when removing the sampler will enhance sample recovery. however, this practice may not be appropriate when drilling at contamination sites.

2.17 When sampling soils where recovery is poor, lining the sampler with a flexible material such as plastic wrap or placing a sand catch in the shoe will often increase sample recovery.

2.18 Careful measurement of all drilling tools, samplers, casing, etc. must be exercised throughout all phases of the test boring operation.

2.19 Carefully open the sampler and describe the contents, noting soil structure, color, characteristics, etc. following the Unified Soils Classification System.

2.20 All pertinent data concerning sampling activities including sampling, interval, blow counts and sample recovery should be entered on the well/boring log.

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. Caution: 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)

APPENDIX III
LABORATORY ANALYTICAL RESULTS - SOIL

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Client Number: 201-175-3006.
Project ID: Chevron/Wenatchee
Work Order Number: C0-11-334

November 20, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/14/90, under chain of custody number 72-11639.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Table 1

ANALYTICAL RESULTS

Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Soil

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		01	02	03	04
Client Identification		MW-2B 10'	MW-2D 20'	MW-3B	MW-3D
Date Sampled		11/07/90	11/07/90	11/07/90	11/07/90
Date Extracted		11/16/90	11/16/90	11/16/90	11/16/90
Date Analyzed		11/16/90	11/16/90	11/16/90	11/16/90
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
Benzene	0.005	<0.005	<0.005	<0.005	<0.005
Toluene	0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	0.005	<0.005	<0.005	<0.005	<0.005
Xylene, total	0.015	<0.015	<0.015	<0.015	<0.015
BTEX, total	--	--	--	--	--
TPH as Gasoline	1	<1	<1	<1	<1
Detection Limit Multiplier		1	1	1	1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

Table 1 (Continued)

ANALYTICAL RESULTS

Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Soil

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		05	06	07	08
Client Identification		MW-4B	MW-4D	MW-1C	MW-1B
Date Sampled		11/07/90	11/07/90	11/07/90	11/07/90
Date Extracted		11/16/90	11/16/90	11/16/90	11/16/90
Date Analyzed		11/16/90	11/16/90	11/16/90	11/16/90
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
Benzene	0.005	<0.005	<0.005	<0.005	<0.005
Toluene	0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	0.005	<0.005	<0.005	<0.005	<0.005
Xylene, total	0.015	<0.015	<0.015	<0.015	<0.015
BTEX, total	--	--	--	--	--
TPH as Gasoline	1	<1	<1	<1	<1
Detection Limit Multiplier		1	1	1	1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

WORK ORD#: C011335
CLIENT: Mark Nichols
Groundwater Technology, Inc.
19033 West Valley Hwy. D-104
Kent, WA 98032
PROJECT#: 201-175-3006.
LOCATION: Chevron/Wenatchee

SAMPLED: 11/7,10,11/90 BY: S. Haskins
ANALYZED: 11/15/90 BY: J. Floro
MATRIX: Soil S. Moore

TEST RESULTS

PARAMETER	UNITS	MDL	METHOD	SAMPLE # I.D.	01 MW-2B 10'	02 MW-2D 20'	03 MW-3B
Total Petroleum Hydrocarbons	mg/Kg	5	EPA 418.1		17	13	14

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

WORK ORD#: C011335

CLIENT: Mark Nichols
PROJECT#: 201-175-3006.
LOCATION: Chevron/Wenatchee

MATRIX: Soil

TEST RESULTS

PARAMETER	UNITS	MDL	METHOD	SAMPLE # I.D.	04 MW-3D	05 MW-4B	06 MW-4D
Total Petroleum Hydrocarbons	mg/Kg	5	EPA 418.1		15	13	13

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

WORK ORD#: C011335

CLIENT: Mark Nichols
PROJECT#: 201-175-3006.
LOCATION: Chevron/Wenatchee

MATRIX: Soil

TEST RESULTS

PARAMETER	UNITS	MDL	METHOD	SAMPLE # I.D.	07 MW-1C	08 MW-1B
Total Petroleum Hydrocarbons	mg/Kg	5	EPA 418.1		10	8

Emma P. Popek

EMMA P. POPEK, Laboratory Director

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-310

November 19, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/10/90, under chain of custody number 72-11638.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-310

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Gasoline in Soil

Modified EPA Method 8015[a]

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

GTEL Sample Number		01	02		
Client Identification		MW 5A	MW 5D		
Date Sampled		11/08/90	11/08/90		
Date Extracted		11/14/90	11/14/90		
Date Analyzed		11/14/90	11/14/90		
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
TPH as gasoline	1	<1	<1		
Detection Limit Multiplier		1	1		

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

11/16/90 tw Page 1 of 1
WORK ORD#: C011311
CLIENT: Mark Nichols
Groundwater Technology, Inc.
19033 West Valley Hwy. D-104
Kent, WA 98032
PROJECT#: 201-175-3006.
LOCATION: Wenatchee

SAMPLED: 11/08/90 BY: S. Haskins
RECEIVED: 11/10/90
ANALYZED: 11/12/90 BY: J. Floro
MATRIX: Soil

TEST RESULTS

PARAMETER	UNITS	MDL	METHOD	SAMPLE # I.D.	01 MW-5B	02 MW-5D
Total Petroleum Hydrocarbons	mg/Kg	5	SM 418.1		12	10

Emma P. Popek
EMMA P. POPEK, Laboratory Director

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-313

November 30, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/10/90, under chain of custody number 72-11638.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Table 1

ANALYTICAL RESULTS

Polychlorinated Biphenyls in Soil

EPA Method 8080[a]

GTEL Sample Number		01	02		
Client Identification		MW-5B	MW-5D		
Date Sampled		11/08/90	11/08/90		
Date Extracted		11/15/90	11/15/90		
Date Analyzed		11/19/90	11/19/90		
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
PCB-1016	0.1	< 0.1	< 0.1		
PCB-1221	0.1	< 0.1	< 0.1		
PCB-1232	0.1	< 0.1	< 0.1		
PCB-1242	0.1	< 0.1	< 0.1		
PCB-1248	0.1	< 0.1	< 0.1		
PCB-1254	0.1	< 0.1	< 0.1		
PCB-1260	0.1	< 0.1	< 0.1		
Detection Limit Multiplier		1	1		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Sample extraction by EPA Method 3540.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-314

November 20, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/10/90, under chain of custody number 72-11638.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-314

Table 1

ANALYTICAL RESULTS

Extraction Procedure Toxicity Metals in Soil

GTEL Sample Number			01	02		
Client Identification			MW-5B	MW-5D		
Date Sampled			11/08/90	11/08/90		
Date Extracted			11/14/90	11/14/90		
Date Analyzed (Method 6010)			11/16/90	11/16/90		
Date Analyzed (Method 7470)			11/16/90	11/16/90		
Analyte	Method[a]	Detection Limit, mg/L	Extract Concentration, mg/L			
Arsenic	EPA 6010	1	<1	<1		
Barium	EPA 6010	0.02	0.12	0.03		
Cadmium	EPA 6010	0.02	<0.02	<0.02		
Chromium, total	EPA 6010	0.02	<0.02	<0.02		
Lead	EPA 6010	0.1	<0.1	<0.1		
Mercury	EPA 7470	0.0002	<0.0002	0.0002		
Selenium	EPA 6010	1	<1	<1		
Silver	EPA 6010	0.5	<0.5	<0.5		
Detection Limit Multiplier			1	1		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Extraction procedure by Method 1310. Digestion by Method 3005 except for: Method 7470 for mercury, Method 3020 for arsenic and selenium.

GTEL ENVIRONMENTAL LABORATORIES, INC.

4080- Pike Lane
Concord, CA 94520
415-685-7852

800-544-3422 (In CA)
800-423-7143 (Outside CA)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

72- 11638

Project Manager: MARK NICHOLS

Phone #: 206-251-5441

FAX #: 206-251-8452

Address: 19033 W. Valley Hwy D-104 Kent

Site location: WENATCHEE

Project Number: 201-175-3006

Project Name:

I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler Name (Print): S. HASKINS

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME
MW-5A	Boring	01	1		X							X			11/8/90	1040
MW-5B	Boring		1		X							X			11/8	1040
MW-5D	Boring	02	2		X							X			11/8	3:15
MW-5J	Boring		2		X							X			11/8	5:30

ANALYSIS REQUEST

BTEX 602 ☐ 8020 ☐ with MTBE ☐	BTEX/TPH Gas 602/8015 ☐ 8020/8015 ☒ MTBE ☐	TPH as ☒ Gas ☐ Diesel ☐ Jet Fuel	Product I.D. by GC (SIMDIS) ☐	Total Oil & Grease: 413.1 ☐ 413.2 ☐ 503A ☐	Total Petroleum Hydrocarbons: 418.1 ☒ 503E ☐	EPA 601 ☐ 8010 ☒ DCA only ☐	EPA 602 ☐ 8020 ☐	EPA 608 ☐ 8080 ☒ PCBs only ☐	EPA 610 ☐ 8310 ☐	EPA 624 ☐ 8240 ☐ NBS +15 ☐	EPA 625 ☐ 8270 ☐ NBS +25 ☐	EPTOX: Metals ☒ Pesticides ☐ Herbicides ☐	TCLP Metals ☐ VOA ☐ Semi VOA ☐	EPA Priority Pollutant Metals ☐ HSL ☐	LEAD 7420 ☐ 7421 ☐ 239.2 ☐ 6010 ☐ Org. Lead ☐	CAM Metals ☐ STLC ☐ TTLC	Corrosivity ☐ Flashpoint ☐ Reactivity ☐
X	X	X				X				No		BTEX	X				
					X			X				X					
		X			X	X		X				X					
	X				X	X		X		Hold		X					

CUSTODY RECORD

	Received by:	Time	Date
Relinquished by Sampler:			
Relinquished by:	Received by:	Time	Date
Relinquished by:	Received by Laboratory:	Time	Date

Way bill # 9150

11/10

SPECIAL HANDLING

24 HOURS ☐
EXPEDITED 48 Hours ☐
SEVEN DAY ☐ 5 DAY
OTHER _____(#) BUSINESS DAYS
QA/QC CLP Level ☐ Blue Level ☐
FAX ☑

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:

Lab Use Only

Storage Location

Lot #:

Work Order #:

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-312

November 19, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/10/90, under chain of custody number 72-11638.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Table 1

ANALYTICAL RESULTS

Halogenated Volatile Organics in Soil

EPA Method 8010[a]

GTEL Sample Number		01	02		
Client Identification		MW 5A	MW 5D		
Date Sampled		11/08/90	11/08/90		
Date Extracted		11/14/90	11/14/90		
Date Analyzed		11/14/90	11/14/90		
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
Chloromethane	0.5	< 0.5	< 0.5		
Bromomethane	0.5	< 0.5	< 0.5		
Vinyl chloride	1	< 1	< 1		
Chloroethane	0.5	< 0.5	< 0.5		
Methylene chloride	0.5	< 0.5	< 0.5		
1,1-Dichloroethene	0.2	< 0.2	< 0.2		
1,1-Dichloroethane	0.5	< 0.5	< 0.5		
trans-1,2-Dichloroethene	0.5	< 0.5	< 0.5		
Chloroform	0.5	< 0.5	< 0.5		
1,2-Dichloroethane	0.5	< 0.5	< 0.5		
1,1,1-Trichloroethane	0.5	< 0.5	< 0.5		
Carbon tetrachloride	0.5	< 0.5	< 0.5		
Bromodichloromethane	0.5	< 0.5	< 0.5		
1,2-Dichloropropane	0.5	< 0.5	< 0.5		
cis-1,3-Dichloropropene	0.5	< 0.5	< 0.5		
Trichloroethene	0.5	< 0.5	< 0.5		
Dichlorodifluoromethane	0.5	< 0.5	< 0.5		
Dibromochloromethane	0.5	< 0.5	< 0.5		
1,1,2-Trichloroethane	0.5	< 0.5	< 0.5		
trans-1,3-Dichloropropene	0.5	< 0.5	< 0.5		
2-Chloroethylvinyl ether	1	< 1	< 1		
Bromoform	0.5	< 0.5	< 0.5		
Tetrachloroethene	0.5	< 0.5	< 0.5		
1,1,2,2-Tetrachloroethane	0.5	< 0.5	< 0.5		
Chlorobenzene	0.5	< 0.5	< 0.5		
1,2-Dichlorobenzene	0.5	< 0.5	< 0.5		
1,3-Dichlorobenzene	0.5	< 0.5	< 0.5		
1,4-Dichlorobenzene	0.5	< 0.5	< 0.5		
Trichlorofluoromethane	0.5	< 0.5	< 0.5		
Detection Limit Multiplier		1	1		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Sample prepared by EPA Method 5030 (high-level solvent extraction and purge and trap).

APPENDIX IV
LABORATORY ANALYTICAL RESULTS - GROUNDWATER

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Client Number: 201-175-3006.
Project ID: Chevron/Wenatchee
Work Order Number: C0-11-336

November 20, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/15/90, under chain of custody number 72-11649.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Client Number: 201-175-3006.
Project ID: Chevron/Wenatchee
Work Order Number: C0-11-336

Table 1

ANALYTICAL RESULTS

Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Water

EPA Methods 5030, 8020, and Modified 8015[a]

GTEL Sample Number		01	02	03	04
Client Identification		MW-2L	MW-3L	MW-4L	MW-5L
Date Sampled		11/12/90	11/12/90	11/12/90	11/12/90
Date Analyzed		11/15/90	11/15/90	11/15/90	11/15/90
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	1	< 0.3	< 0.3	2
Toluene	0.3	9	< 0.3	< 0.3	0.4
Ethylbenzene	0.3	570	< 0.3	< 0.3	< 0.3
Xylene, total	0.6	2500	< 0.6	< 0.6	1
BTEX, total	--	3100	--	--	3
TPH as Gasoline	1	8600	90	< 1	46
Detection Limit Multiplier		1	1	1	1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

WORK ORD#: C011337
CLIENT: Mark Nichols
Groundwater Technology, Inc.
19033 West Valley Hwy. D-104
Kent, WA 98032
PROJECT#: 201-175-3006.
LOCATION: Chevron/Wenatchee

SAMPLED: 11/12/90 BY: S. Haskins
ANALYZED: 11/15/90 BY: J. Floro
MATRIX: Water

TEST RESULTS

PARAMETER	UNITS	MDL	METHOD	SAMPLE # I.D.	01 MW-2A	02 MW-3A	03 MW-4A
Total Petroleum Hydrocarbons	mg/L	1	EPA 418.1		2	<1	<1

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*

WORK ORD#: C011337

CLIENT: Mark Nichols
PROJECT#: 201-175-3006.
LOCATION: Chevron/Wenatchee

MATRIX: Water

TEST RESULTS

PARAMETER	UNITS	MDL	METHOD	SAMPLE # I.D.	04 MW-5A
Total Petroleum Hydrocarbons	mg/L	1	EPA 418.1		<1

Emma P. Popek
EMMA P. POPEK, Laboratory Director

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

RECEIVED NOV 26 1990

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-413

November 19, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/16/90, under chain of custody number 72-11611.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Client Number: 201-175-3006.
Project ID: Wenatchee
Work Order Number: C0-11-413

Table 1

ANALYTICAL RESULTS

Lead in Water

EPA Method 7421[a]

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Sample preparation by EPA Method 3020.

GTEL Sample Number		01	02	03	
Client Identification		MW 2W	MW 3W	MW 4W	
Date Sampled		11/14/90	11/14/90	11/14/90	
Date Prepared		11/16/90	11/16/90	11/16/90	
Date Analyzed		11/16/90	11/16/90	11/16/90	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Lead, total	5	5	<5	5	
Detection Limit Multiplier		1	1	1	

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL ENVIRONMENTAL LABORATORIES, INC.
4080- Pike Lane
Concord, CA 94520
415-685-7852
800-544-3422 (In CA)
800-423-7143 (Outside CA)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST 72- 11611

C011413 Dr. 1/1

Project Manager: MARK Nichols
Phone #: (206) 251 - 5441
FAX #: (206) 251 - 8452
Address: 19033 W. Valley Hy. D-104 Kent WA 98032
Site location: Wenatchee
Project Number: 201-175-3006
Project Name: Chevron/Wenatchee
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): J. Josey

ANALYSIS REQUEST

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME	BTEX 602 ☐ 8020 ☐ with MTBE ☐	BTEX/TPH Gas. 602/8015 ☐ 8020/8015 ☐ MTBE ☐	TPH as ☐ Gas ☐ Diesel ☐ Jet Fuel	Product I.D. by GC (SIMDIS) ☐	Total Oil & Grease: 413.1 ☐ 413.2 ☐ 503A ☐	Total Petroleum Hydrocarbons: 418.1 ☐ 503E ☐	EPA 601 ☐ 8010 ☐ DCA only ☐	EPA 602 ☐ 8020 ☐	EPA 608 ☐ 8080 ☐ PCBs only ☐	EPA 610 ☐ 8310 ☐	EPA 624 ☐ 8240 ☐ NBS +15 ☐	EPA 625 ☐ 8270 ☐ NBS +25 ☐	EPTOX: Metals ☐ Pesticides ☐ Herbicides ☐	TCLP Metals ☐ VOA ☐ Semi VOA ☐	EPA Priority Pollutant Metals ☐ HSL ☐	LEAD 7420 ☒ 7421 ☐ 239.2 ☐ 6010 ☐ Org. Lead ☐	CAM Metals ☐ STLC ☐ TTLC	Corrosivity ☐ Flashpoint ☐ Reactivity ☐	239.1
MW 2W		01	2	X						X		X			11-14	12:20																X			X
MW 3W		02	2	X						X		X			11-14	12:25																X			X
MW 4W		03	2	X						X		X			11-14	12:30																X			X
MW 7L			2	X					X			X			11-14	12:40				HOLD															

RMB 11-19-90

SPECIAL HANDLING
24 HOURS ☐
EXPEDITED 48 Hours ☐ 5DAY
SEVEN DAY ☐
OTHER ________(#) BUSINESS DAYS
QA/QC CLP Level ☐ Blue Level ☐
FAX ☐

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:

Lab Use Only **Storage Location**
Lot #: **Work Order #:**

CUSTODY RECORD

Relinquished by	Date	Time	Received by
Relinquished by Sampler: Jean Josey			Received by:
Relinquished by:			Received by:
Relinquished by:	11/16	10:30	Received by Laboratory: M Bohannon

Way bill #

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Client Number: 201-175-3006.
Project ID: Chevron/Wenatchee
Work Order Number: C0-11-338

November 19, 1990

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

Enclosed please find the analytical results report prepared by GTEL for samples received on 11/15/90, under chain of custody number 72-11649.

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

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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.

Emma P. Popek
Laboratory Director

Client Number: 201-175-3006.
Project ID: Chevron/Wenatchee
Work Order Number: C0-11-338

Table 1

ANALYTICAL RESULTS

Lead in Water

EPA Method 7421[a]

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Sample preparation by EPA Method 3020.

GTEL Sample Number		01			
Client Identification		MW-5W			
Date Sampled		11/12/90			
Date Prepared		11/15/90			
Date Analyzed		11/14/90			
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Lead, total	5	83			
Detection Limit Multiplier		1			

GTEL ENVIRONMENTAL LABORATORIES, INC.

Coll 334

GTEL ENVIRONMENTAL LABORATORIES, INC.

4080- Pike Lane
Concord, CA 94520
415-685-7852

800-544-3422 (In CA)
800-423-7143 (Outside CA)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

72- 11639

Project Manager: MARK NICHOLS

Phone #: 206-251-5401

FAX #: 206-251-8452

Address: 19033 W. Valley Hwy

Site location: Cheslawenatchee

Project Number: 201-175-3006

Project Name:

I attest that the proper field sampling procedures were used during the collection of these samples.

Sampler Name (Print): Dan Haskins

ANALYSIS REQUEST

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME
MW-2B	10'		1		X							X			11/10	2:15
MW-2D	20'		1		X							X			11/10	2:15
MW-3B			1		X							X			11/10	1:50
MW-3D			1		X							X			11/10	2:15
MW-4B			1		X							X			11/11	1:35
MW-4D			1		X							X			11/11	1:50
MW-1C			1		X							X			11/10	9:30
MW-1B			1		X							X			11/11	9:15

BTEX 602 ☐ 8020 ☐ with MTBE ☐
BTEX/TPH Gas 602/8015 ☐ 8020/8015 ☐ MTBE ☐
TPH as ☐ Gas ☐ Diesel ☐ Jet Fuel
Product I.D. by GC (SIMDIS) ☐
Total Oil & Grease: 413.1 ☐ 413.2 ☐ 603A ☐
Total Petroleum Hydrocarbons: 418.1 ☐ 503E ☐
EPA 601 / 8010 ☐ DCA only ☐
EPA 602 ☐ 8020 ☐
EPA 608 ☐ 8080 ☐ PCBs only ☐
EPA 610 ☐ 8310 ☐
EPA 624 ☐ 8240 ☐ NBS +15 ☐
EPA 625 ☐ 8270 ☐ NBS +25 ☐
EPTOX: Metals ☐ Pesticides ☐ Herbicides ☐
TCLP Metals ☐ VOA ☐ Semi VOA ☐
EPA Priority Pollutant Metals ☐ HSL ☐
LEAD 7420 ☐ 7421 ☐ 239.2 ☐ 6010 ☐ Org. Lead ☐
CAM Metals ☐ STLC ☐ TTLC
Corrosivity ☐ Flashpoint ☐ Reactivity ☐

CUSTODY RECORD

Relinquished by Sampler: — Date — Time — Received by: — Date — Time — Received by Laboratory: — Date — Time — Way bill #

Relinquished by: — Date — Time — Received by: — Date — Time

Relinquished by: — Date — Time — Received by: — Date — Time

11/14 11:10

SPECIAL HANDLING

24 HOURS ☐
EXPEDITED 48 Hours ☐ 5 DAY
SEVEN DAY ☐
OTHER _____ (#) BUSINESS DAYS
QA/QC CLP Level ☐ Blue Level ☐
FAX ☐

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:

Lab Use Only — Storage Location

Lot #: — Work Order #:

APPENDIX V
SYNOPSIS OF INVESTIGATION

SYNOPSIS OF INVESTIGATION

An environmental site assessment was conducted at Chevron U.S.A. Inc. service station #7348 in Wenatchee, Washington during the month of November, 1990. Five (5) borings were drilled and four (4) groundwater monitoring wells installed. Material encountered during drilling was sand to a depth of approximately 20 to 25 feet and crystalline bedrock to the maximum depth drilled of 50 feet. Boring MW-1 was backfilled with bentonite as no water was encountered. Borings MW-2, MW-3, and MW-4 were completed as monitoring wells in the sand at approximately 25 feet. Monitoring well MW-5, which was dry in the sand was completed at a depth of 50 feet within a water zone observed at approximately 46 feet.

The results of soil sample analyses for the constituents of concern were non-detectable or below clean-up requirements for the samples collected during drilling. However, water samples from two monitoring wells, MW-2 and MW-5, had concentrations of gasoline hydrocarbons (MW-2) and lead (MW-5) above WDOE Compliance Clean Up Levels.