Chevron

03 AUG 23 AM 11:33

August 19, 1993

3628

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583

Marketing Department
Phone 510 842 9500

Site Assessment & Remediation

Ms. Jennifer Eberle
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Chevron Service Station #9-0121
3026 Lakeshore Avenue, Oakland, CA

Dear Ms. Eberle:

Enclosed is the Groundwater Monitoring and Sampling Report dated July 19, 1993, prepared by our consultant Groundwater Technology Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Sampling for total petroleum hydrocarbons as diesel was inadvertently missed, however will be performed during future monitoring events. Benzene was detected in monitor wells MW-1, MW-2, MW-3, MW-4, and MW-7 at concentrations of 1900, 1100, 32, 430, and 0.6 ppb, respectively. Depth to ground water was measured at approximately 3.5 feet to 10.4 feet below grade and the direction of flow is to the west.

Ground water samples collected from all wells were analyzed for total dissolved solids (TDS). Samples collected from MW-3, MW-6, and MW-8 contained 5600, 15000, and 3500 mg/l TDS, respectively. These values exceed the 3,000 mg/l level set forth in State Water Resources Control Board Resolution No. 88-63, and indicate that the ground water beneath the site is not suitable for municipal or domestic water supply. This data will be considered in the forthcoming remediation feasibility study (RFS). We are currently targeting September 10, 1993 as the submittal date for the RFS.

Chevron will continue to monitor and sample all wells at this site and report findings on a quarterly basis. If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiett, RWQCB - Bay Area
Mr. Steve Krcik, Pacific Environmental Group
Mr. S.A. Willer
File (9-0121 QM4)

JUL 23 '93 J.M.M.

GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387
FAX: (415) 685-9148

July 19, 1993 Project No. 020204097

Mr. Mark Miller
Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583-0804

SUBJECT: Groundwater Monitoring and Sampling Report
Chevron Service Station No. 9-0121
3026 Lakeshore Avenue, Oakland, California

Dear Mr Miller:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on June 11, 1993. The eight monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in monitoring wells. A potentiometric surface (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 1. Additional groundwater samples were collected from each well for total dissolved solids analyses. An additional groundwater sample, collected from monitoring well MW-1, was analyzed for volatile organics and methyl tertiary butyl ether. The laboratory reports and chain-of-custody records are included in Attachment 3. Figures 2 and 3 present TPH-G and benzene concentration maps of samples collected on June 11, 1993. Monitoring well purge water was removed by Groundwater Technology and transported to the Chevron terminal in Richmond, California for recycling.

Groundwater Technology is pleased to assist Chevron on this project. If you have any questions or comments, please call our Concord office at (510) 671-2387.

Sincerely,

Groundwater Technology, Inc.
Written/Submitted by

Tim Watchers
Project Geologist

PR

Groundwater Technology, Inc.
Reviewed/Approved by

David R. Kleesattel
Registered Geologist
No. 5136

REGISTERED GEOLOGIST
DAVID R. KLEESATTEL
NO. 5136
STATE OF CALIFORNIA

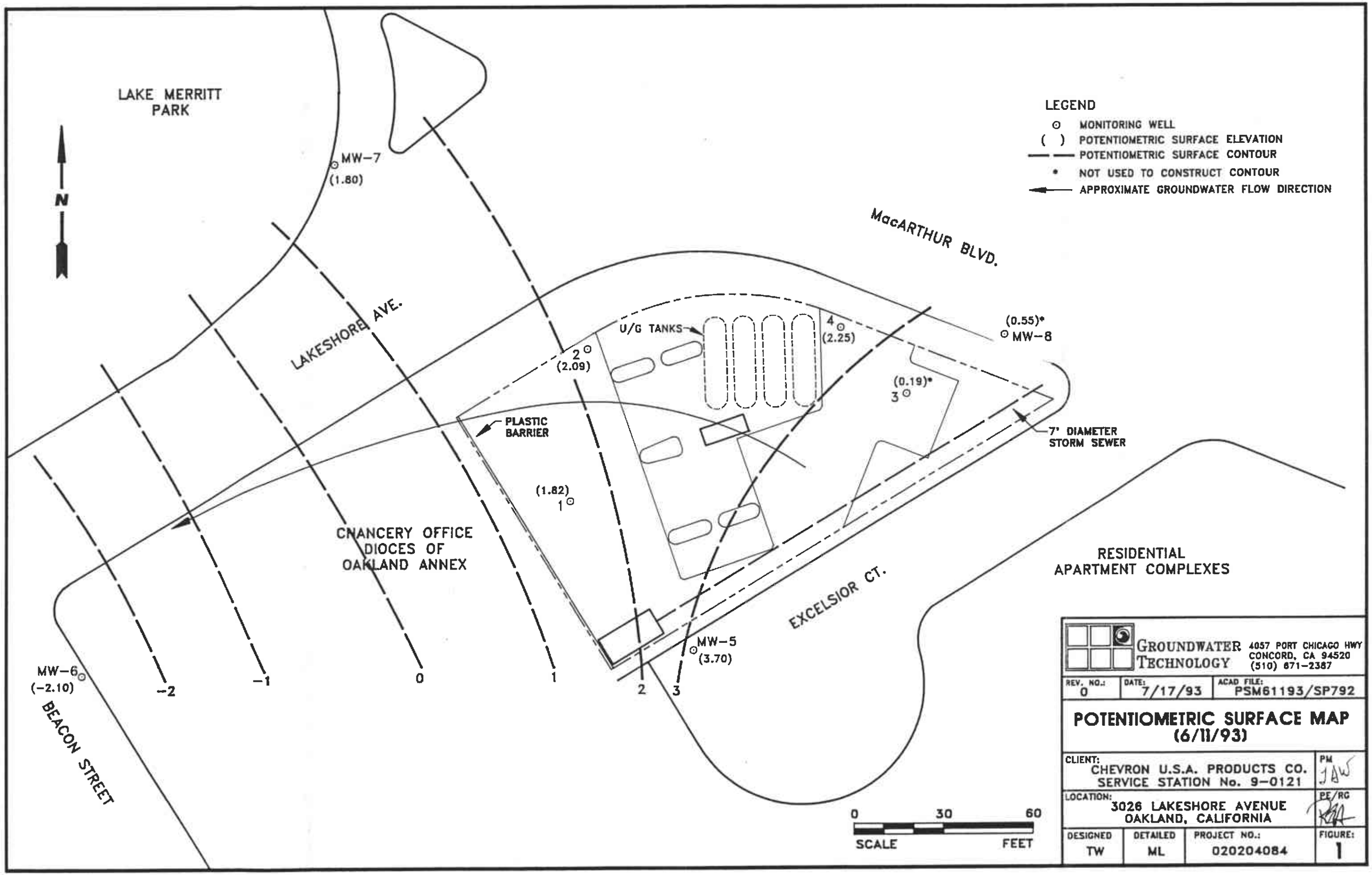
For:
John S. Gaines
Vice President, General Manager
West Region

Attachment 1 Figure
Attachment 2 Table
Attachment 3 Laboratory Report

4097R013.020

ATTACHMENT 1

Figures



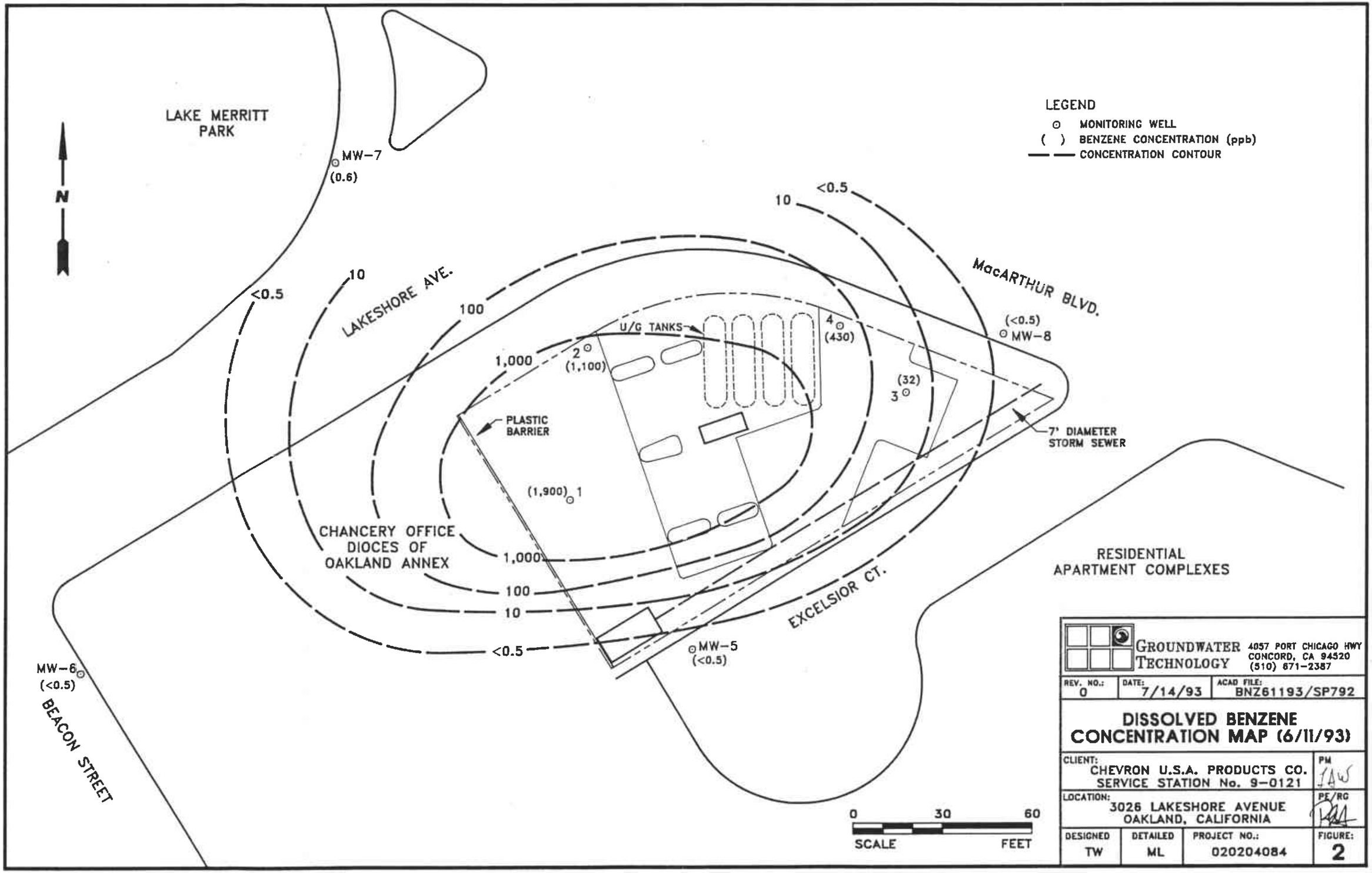
GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387

REV. NO.:	DATE:	ACAD FILE:
0	7/17/93	PSM61193/SP792

POTENTIOMETRIC SURFACE MAP (6/11/93)

CLIENT:	PM
CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0121	JAW
LOCATION: 3026 LAKESHORE AVENUE OAKLAND, CALIFORNIA	PE/RG

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
TW	ML	020204084	1



GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

REV. NO.:	DATE:	ACAD FILE:
0	7/14/93	BNZ61193/SP792

DISSOLVED BENZENE CONCENTRATION MAP (6/11/93)

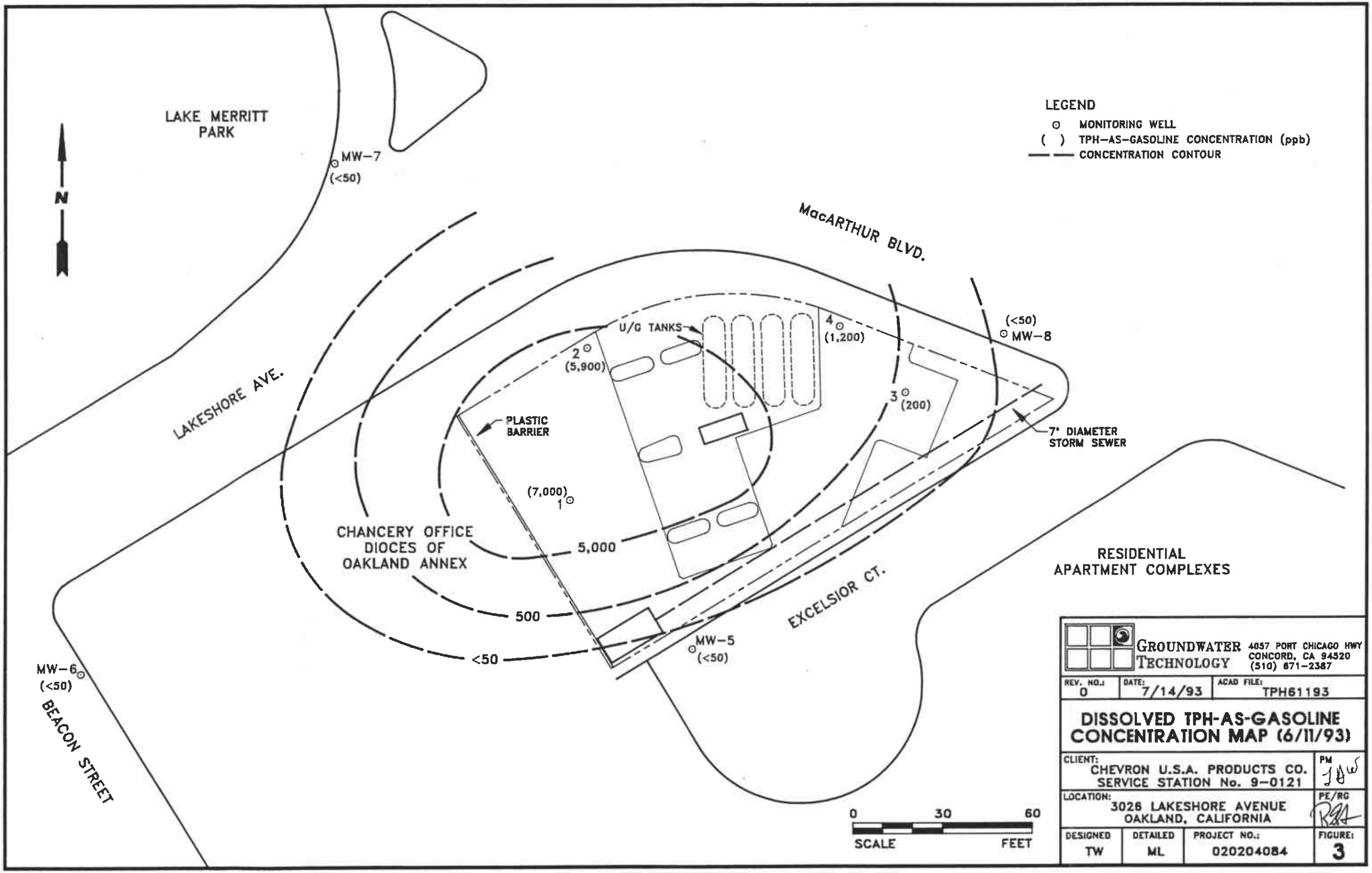
CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-0121

PM: TAW

LOCATION: 3026 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

PE/RG:

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
TW	ML	020204084	2



GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

REV. NO.:	DATE:	ACAD FILE:
0	7/14/93	TPH61193

DISSOLVED TPH-AS-GASOLINE CONCENTRATION MAP (6/11/93)

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-0121

PM: TW

LOCATION: 3026 LAKESHORE AVENUE
OAKLAND, CALIFORNIA

PE/RG: RGA

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
TW	ML	020204084	3

ATTACHMENT 2

Table

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0121
3026 Lakeshore Avenue, Oakland, California

Well	Casing Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)
MW-1		08/20/91	5,100	1,700	21	220	34	260	---	5.20	0.00	1.62
	6.82	09/30/91	Separate-phase hydrocarbons present						---	5.67	Sheen	1.15
		10/28/91								5.30	0.03	1.50
	6.89	01/08/92	5,400	770	13	95	31	---	---	5.15	Sheen	1.67
		01/13/92	---	---	---	---	---	*4,400	---	---	---	---
		06/23/92	7,700	1,500	40	230	100	*2,000	---	5.41	0.00	1.48
		08/24/92	---	---	---	---	---	---	---	5.77	0.00	1.12
		09/21/92	3,500	1,700	28	190	78	<50	---	5.89	0.00	1.00
		10/26/92	---	---	---	---	---	---	---	5.94	0.00	.95
		12/23/92	60,000	7,100	240	2,000	1,300	*5,500	---	4.71	0.00	2.18
		01/08/93	---	---	---	---	---	---	---	---	---	---
		03/25/93	***530	1,100	41	67	79	<10	---	4.72	0.00	2.17
		[illegible]	[illegible]	[illegible]	33	120	69	[illegible]	840	5.07	0.00	5.37
MW-2	6.27	08/20/91	9,300	3,700	55	530	75	600	---	4.35	0.00	1.92
		09/30/91	3,500	2,600	47	440	68	---	---	4.99	0.00	1.28
		10/28/91	4,600	1,800	29	290	53	---	---	4.91	0.00	1.36
		01/08/92	14,000	4,300	70	<25	130	---	---	4.64	Sheen	1.63
		01/13/92	---	---	---	---	---	*38,000	---	---	---	---
		06/23/92	---	---	---	---	---	---	---	4.64	0.02	1.63
		08/24/92	Separate-phase hydrocarbons present						---	4.94	0.02	1.34
		09/21/92							---	5.08	0.01	1.20
		10/26/92	---	---	---	---	---	---	---	5.93	0.00	.34
		12/23/92	21,000	5,400	59	1,300	160	160,000	---	---	---	---
		01/08/93	---	---	---	---	---	---	---	3.70	0.00	2.57
		03/25/93	---	---	---	---	---	---	---	3.38	Sheen	2.89
		[illegible]	[illegible]	[illegible]	23	240	51	[illegible]	[illegible]	4.18	0.00	2.09

GROUNDWATER TECHNOLOGY

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0121
3026 Lakeshore Avenue, Oakland, California

Well	Casing Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)
MW-3	8.71	08/20/91	3,100	200	13	15	12	200	---	8.45	0.00	0.26
		09/30/91	1,000	150	8.3	13	6.7	---	---	8.74	0.00	-0.03
		10/28/91	1,200	120	6.7	11	7.5	---	---	8.76	0.00	-0.05
		01/08/92	410	120	0.9	4.1	3.4	---	---	8.77	0.00	-0.06
		01/13/92	---	---	---	---	---	*220	---	---	---	---
		06/23/92	630	43	0.8	8.2	3.4	<50	---	8.68	0.00	0.03
		08/24/92	---	---	---	---	---	---	---	8.85	0.00	-0.14
		09/21/92	1,800	730	1.4	66	39	<50	---	8.94	0.00	-0.23
		10/26/92	---	---	---	---	---	---	---	9.07	0.00	-0.36
		12/23/92	840	270	3.4	15	4.2	*850	---	---	---	---
		01/08/93	---	---	---	---	---	---	---	7.69	0.00	1.02
		03/25/93	760	270	4	10	5	<10	---	7.74	0.00	0.97
		[redacted]	[redacted]	[redacted]	1	5	2	[redacted]	[redacted]	8.52	0.00	0.19
MW-4	7.37	08/20/91	1,800	870	4	3	9	160	---	5.05	0.00	1.32
		09/30/91	670	830	5.5	2.7	12	---	---	5.67	0.00	1.70
		10/28/91	2,800	990	5.8	4.8	19	---	---	5.81	0.00	1.56
		01/08/92	2,900	1,200	10	7	18	---	---	5.34	0.00	2.03
		01/13/92	---	---	---	---	---	*1,000	---	---	---	---
		06/23/92	1,600	380	6.5	3	12	<50	---	5.37	0.00	2.00
		08/24/92	---	---	---	---	---	---	---	5.75	0.00	1.62
		09/21/92	1,200	480	5.6	3.7	11	<50	---	5.95	0.00	1.42
		10/26/92	---	---	---	---	---	---	---	5.96	0.00	1.41
		12/23/92	1,500	700	3.6	3.2	11	*1,800	---	---	---	---
		01/08/93	---	---	---	---	---	---	---	4.64	0.00	2.73
		03/25/93	***520	160	3	1	4	<10	---	4.42	0.00	2.95
		[redacted]	[redacted]	[redacted]	5	6	11	[redacted]	[redacted]	5.12	0.00	2.25

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0121
3026 Lakeshore Avenue, Oakland, California

Well	Casing Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)
MW-5	14.14	06/23/92	<50	<0.5	<0.5	<0.5	<0.5	<50	—	12.24	0.00	1.90
		08/24/92	—	—	—	—	—	—	—	12.29	0.00	1.85
		09/21/92	<50	<0.5	<0.5	<0.5	<0.5	*60	—	12.46	0.00	1.68
		10/26/92	—	—	—	—	—	—	—	12.52	0.00	1.62
		12/23/92	—	—	—	—	—	—	—	11.12	0.00	3.02
		01/08/93	—	—	—	—	—	—	—	—	—	—
		03/25/93	<50	<0.5	<0.5	<0.5	0.9	<10	—	9.74	0.00	4.40
		[redacted]	<50	<0.5	<0.5	<0.5	<0.5	[redacted]	[redacted]	10.44	0.00	3.70
MW-6	4.46	06/23/92	<50	4.3	<0.5	0.8	0.9	120	—	5.14	0.00	-0.68
		08/24/92	—	—	—	—	—	—	—	4.95	0.00	-0.49
		09/21/92	<250	<2.5	<2.5	<2.5	<2.5	<50	—	4.90	0.00	-0.44
		10/26/92	—	—	—	—	—	—	—	5.52	0.00	-1.06
		12/23/92	<50	<0.5	<0.5	<0.5	<0.5	81	—	5.40	0.00	-0.94
		01/08/93	—	—	—	—	—	—	—	—	—	—
		03/25/93	<50	<0.5	<0.5	<0.5	0.7	<10	—	6.10	0.00	-1.64
		[redacted]	<50	<0.5	<0.5	<0.5	<0.5	[redacted]	[redacted]	6.56	0.00	-2.10
MW-7	5.26	06/23/92	<50	4.7	<0.5	<0.5	<0.5	<50	—	4.38	0.00	0.88
		08/24/92	—	—	—	—	—	—	—	5.55	0.00	-0.29
		09/21/92	<50	<0.5	<0.5	<0.5	<0.5	<50	—	5.65	0.00	-0.39
		10/26/92	—	—	—	—	—	—	—	5.51	0.00	-0.25
		12/23/92	<50	2.9	<0.5	<0.5	<0.5	60	—	3.95	0.00	1.31
		01/08/93	—	—	—	—	—	—	—	—	—	—
		03/25/93	<50	<0.5	<0.5	<0.5	<0.5	<10	—	2.50	0.00	2.76
		[redacted]	<50	[redacted]	<0.5	<0.5	<0.5	[redacted]	[redacted]	3.46	0.00	1.80
MW-8	8.94	06/23/92	<50	<0.5	<0.5	<0.5	<0.5	<50	—	24.14	0.00	-15.20
		08/24/92	—	—	—	—	—	—	—	8.60	0.00	0.34
		09/21/92	**94	<0.5	<0.5	<0.5	<0.5	<50	—	8.39	0.00	0.55
		10/26/92	—	—	—	—	—	—	—	9.12	0.00	-0.18
		12/23/92	<50	0.7	5.0	0.7	2.9	79	—	8.11	0.00	0.83
		01/08/93	—	—	—	—	—	—	—	—	—	—
		03/25/93	—	—	—	—	—	—	—	—	—	—
		[redacted]	<50	<0.5	<0.5	<0.5	<0.5	[redacted]	[redacted]	8.39	0.00	0.55

GROUNDWATER TECHNOLOGY

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0121
3026 Lakeshore Avenue, Oakland, California

Well	Casing Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)
TB-LB		08/24/92	---	---	---	---	---	---	---	---	---	---
		09/21/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
		10/26/92	---	---	---	---	---	---	---	---	---	---
		12/23/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
		01/08/93	---	---	---	---	---	---	---	---	---	---
		03/25/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
		06/11/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---

TPH-G = Total petroleum hydrocarbons-as-gasolines
TPH-D = Total petroleum hydrocarbons-as-diesel fuel
TDS = Total dissolved solids
DTW = Depth to groundwater
SPT = Separate-phase hydrocarbon thickness
WTE = Water-table elevation
TB-LB = Trip blank/Lab blank
* = Diesel fuel range concentration reported. The laboratory reported that the majority of peaks were observed in the gasoline range of the chromatogram, or that the pattern observed in the chromatogram was not typical of diesel fuel.
** = Gasoline range concentration reported. A nonstandard gasoline pattern was observed in the chromatogram.
*** = Miscellaneous peak not included in gasoline total.
**** = Uncategorized compound is not included in gasoline hydrocarbon total.
--- = Not applicable, not analyzed, not measured

ATTACHMENT 3

Laboratory Reports

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

June 24, 1993

Nicole Merchant
Groundwater Technology, Inc.
4057 Port Chicago Hwy.
Concord, CA 94520

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 06/14/93.

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
Laboratory Director

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

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	03	05	07
Client Identification		TB-LB	MW8	MW7	MW6
Date Sampled		06/11/93	06/11/93	06/11/93	06/11/93
Date Analyzed		06/21/93	06/21/93	06/21/93	06/21/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5	0.6	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Xylene, total	0.5	<0.5	<0.5	<0.5	<0.5
BTEX, total	--	--	--	0.6	--
TPH as Gasoline	50	<50	<50	<50	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		84.1	86.4	83.9	86.9

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. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

Table 1 (Continued)

ANALYTICAL RESULTS

Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Water

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

GTEL Sample Number		09	11	13	15
Client Identification		MW5	MW4	MW3	MW1
Date Sampled		06/11/93	06/11/93	06/11/93	06/11/93
Date Analyzed		06/21/93	06/23/93	06/23/93	06/21/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	430	32	1900
Toluene	0.5	<0.5	5	1	33
Ethylbenzene	0.5	<0.5	6	5	120
Xylene, total	0.5	<0.5	11	2	69
BTEX, total	--	--	450	40	2100
TPH as Gasoline	50	<50	1200*	200	7000*
Detection Limit Multiplier		1	1	1	5
BFB surrogate, % recovery		88.5	89.9	82.6	94.4

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. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.

* Uncategorized compound is not included in gasoline hydrocarbon total.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

Table 1 (Continued)

ANALYTICAL RESULTS

Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water

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

GTEL Sample Number		17	Q062293		
Client Identification		MW2	METHOD BLANK		
Date Sampled		06/11/93	--		
Date Analyzed		06/23/93	06/22/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	1100	<0.5		
Toluene	0.5	23	<0.5		
Ethylbenzene	0.5	240	<0.5		
Xylene, total	0.5	51	<0.5		
BTEX, total	--	1400	--		
TPH as Gasoline	50	5900	<50		
Detection Limit Multiplier		10	1		
BFB surrogate, % recovery		86.0	86.0		

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. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

ANALYTICAL RESULTS

Matrix: Water

				Sample Number	03	05	07	09
				Sample Identification	MW8	MW7	MW6	MW5
				Date Sampled	06/11/93	06/11/93	06/11/93	06/11/93
Test Description	Units	Detection Limit	Method	Date Analyzed	Test Result			
Total dissolved solids	mg/L	10	EPA 160.1	06/16/93	3500	2200	15000	770

Note: Test Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, March, 1983.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

ANALYTICAL RESULTS

Matrix: Water

				Sample Number	11	13	15	17
				Sample Identification	MW4	MW3	MW1	MW2
				Date Sampled	06/11/93	06/11/93	06/11/93	06/11/93
Test Description	Units	Detection Limit	Method	Date Analyzed	Test Result			
Total dissolved solids	mg/L	10	EPA 160.1	06/16/93	2600	5600	840	2300

Note: Test Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, March, 1983.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

ANALYTICAL RESULTS

Matrix: Water

				Sample Number	061593 TDS			
				Sample Identification	METHOD BLANK			
				Date Sampled	--			
Test Description	Units	Detection Limit	Method	Date Analyzed	Test Result			
Total dissolved solids	mg/L	10	EPA 160.1	06/16/93	<10			

Note: Test Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, March, 1983.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 020204097
Consultant Project Number: 020204097
Facility Number: 9-0121
Project ID: 3026 Lakeshore Blvd., Oakland
Work Order Number: C3-06-0226

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	Reagent Water	20.0	ug/L	72.0	86.5	18.3	70 - 147
Toluene	Reagent Water	20.0	ug/L	78.0	86.5	10.3	67 - 150
Ethylbenzene	Reagent Water	20.0	ug/L	75.0	80.5	7.1	69 - 145
Xylene, total	Reagent Water	60.0	ug/L	78.1	83.2	6.3	71 - 152

Sample and Sample Duplicate Results

Matrix: Water

Analyte	Sample ID	Date of Analysis	Sample Results	Sample Duplicate Results	Units	RPD[a], %
Wet Chemistry:						
Dissolved Solids, total	C3060226-17	06/16/93	2299	2304	mg/L	0.217

GTEL ENVIRONMENTAL LABORATORIES, INC.

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Chain-of-Custody-Record

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-0121
Facility Address 3026 Lakeshore Blvd, Oakland
Consultant Project Number 020204097
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord, CA 94520
Project Contact (Name) Nicole Merchant
(Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Mark Miller
(Phone) 842-8134
Laboratory Name GTEL
Laboratory Release Number 876-6900
Samples Collected by (Name) Anthony Smith
Collection Date 6/11/93
Signature Anthony E Smith

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Hold	TDS				Remarks: Do not Bill TB-LB Page 1of2
TB-LB	01	1	W			HCL	YES	X													Contact Bill S.
RBMW8	02	1			3:20											X					alert him to
MW8	03	~~4~~ 3			↓			X									X				MW-1 for 8240
RBMW7	04	1			3:30											X					if a misc peak
MW7	05	~~4~~ 3			↓			X									X				shows up in
RBMW6	06	1			3:40											X					The TPH-G.
MW6	07	~~4~~ 3	W		↓	HCL		X									X				He is expecting
RBMW5	08	1			3:50											X					this.
MW5	09	~~4~~ 3			↓			X									X				
RBMW4	10	1			4:00											X					SEALS INTACT
MW4	11	~~4~~ 3			↓			X									X				ON ICE @ 3°C
RBMW3	12	1			4:10											X					6/14/93
MW3	13	~~4~~ 3	W		↓	HCL	YES	X									X				

MM 6/11/93

C3060226

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Anthony Smith	GTI	6/14/93 0900			

Relinquished By (Signature)	Organization	Date/Time	Recieved For Laboratory By (Signature)	Date/Time
			[signature]	6/14/93 0900

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

COC-3LDWG/03 91/MGH

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Chain-of-Custody-Record

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-0121
Facility Address 3026 Lakeshore, Oakland
Consultant Project Number 020204097
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord, CA 94520
Project Contact (Name) Nicole Merchant
(Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Mark Miller
(Phone) 842-8134
Laboratory Name GTEL
Laboratory Release Number 876-6900
Samples Collected by (Name) Anthony Smith
Collection Date 6/11/93
Signature Anthony E Smith

Page 2 of 2

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Hold	TDS				Remarks
RB MW1	14	1	W		4:20	HCL	Yes									X					
15 MW1	15	16			↓			X									X				Contact Bill about 8420 for mw-1. Run 8240 if TPH-G shows a misc. Peak. SEALS INTACT ON ICE AT 3°C 6/14/93 (BEC)
RB MW2	16	1			4:30											X					
MW2	17	13	W		↓	HCL	Yes	X									X				

C30600226

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Anthony Smith	GTI	6/14/93 0900			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time 6/14/93 0900

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

COC-3.DWG/03 01/MCH

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

Client Number: 020204097
Project ID: 3026 Lakeshore
Oakland
Work Order Number: C3-06-0399

June 25, 1993

Nicole Merchant

Groundwater Technology, Inc.

4057 Port Chicago Hwy.

Concord, CA 94520

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 06/14/93.

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 certificate numbers 194 and 1075, 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

Client Number: 020204097
Project ID: 3026 Lakeshore
Oakland
Work Order Number: C3-06-0399

Table 1

ANALYTICAL RESULTS
Volatile Organics and MTBE in Water
EPA Method 8240[a]

GTEL Sample Number		01	062393 MSC-1		
Client Identification		MW-1	METHOD BLANK		
Date Sampled		06/11/93	--		
Date Analyzed		06/23/93	06/23/93		
Analyte	Quantitation Limit, ug/L	Concentration, ug/L			
Chloromethane	10	<10	<10		
Bromomethane	10	<10	<10		
Vinyl chloride	10	<10	<10		
Chloroethane	10	<10	<10		
Methylene chloride	5	<5	<5		
Acetone	20	<20	<20		
Carbon disulfide	5	<5	<5		
1,1-Dichloroethene	5	<5	<5		
1,1-Dichloroethane	5	<5	<5		
1,2-Dichloroethene, total	5	<5	<5		
Chloroform	5	<5	<5		
1,2-Dichloroethane	5	<5	<5		
2-Butanone	20	<20	<20		
1,1,1-Trichloroethane	5	<5	<5		
Carbon tetrachloride	5	<5	<5		
Vinyl acetate	50	<50	<50		
Bromodichloromethane	5	<5	<5		
1,2-Dichloropropane	5	<5	<5		
cis-1,3-Dichloropropene	5	<5	<5		
Trichloroethene	5	<5	<5		
Dibromochloromethane	5	<5	<5		
1,1,2-Trichloroethane	5	<5	<5		
MTBE	5	9400	<5		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986 (method modified for additional compounds). Sample introduction by EPA Method 5030.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 1(Continued)

ANALYTICAL RESULTS
Volatile Organics and MTBE in Water
EPA Method 8240[a]

GTEL Sample Number		01	062393 MSC-1		
Client Identification		MW-1	METHOD BLANK		
Date Sampled		06/11/93	--		
Date Analyzed		06/23/93	06/23/93		
Analyte	Quantitation Limit, ug/L	Concentration, ug/L			
Benzene	5	2000	<5		
trans-1,3-Dichloropropene	5	<5	<5		
2-Chloroethylvinyl ether	10	<10	<10		
Bromoform	5	<5	<5		
4-Methyl-2-pentanone	20	<20	<20		
2-Hexanone	20	<20	<20		
Tetrachloroethene	5	<5	<5		
1,1,2,2-Tetrachloroethane	5	<5	<5		
Toluene	5	30	<5		
Chlorobenzene	5	<5	<5		
Ethylbenzene	5	140	<5		
Styrene	5	<5	<5		
1,2-Dichlorobenzene	5	<5	<5		
1,3-Dichlorobenzene	5	<5	<5		
1,4-Dichlorobenzene	5	<5	<5		
Xylene, total	5	67	<5		
Trichlorofluoromethane	5	<5	<5		
Quantitation Limit Multiplier		1	1		
DCE surrogate, % recovery		105	106		
TOL surrogate, %recovery		108	110		
BFB surrogate, % recovery		102	98.0		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986 (method modified for additional compounds). Sample introduction by EPA Method 5030.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Client Number: 020204097
Project ID: 3026 Lakeshore Oakland
Work Order Number: C3-06-0399

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
EPA 8240:							
1,1-Dichloroethene	C3060297-01	50.0	ug/L	77.0	84.0	8.7	61 - 145
Trichloroethene	C3060297-01	50.0	ug/L	90.6	92.6	2.2	71 - 120
Benzene	C3060297-01	50.0	ug/L	88.6	89.4	0.9	76 - 127
Toluene	C3060297-01	50.0	ug/L	98.8	94.8	4.1	76 - 125
Chlorobenzene	C3060297-01	50.0	ug/L	98.2	99.8	1.6	75 - 130

GTEL ENVIRONMENTAL LABORATORIES, INC.

ax copy of Lab Report and COC to Chevron Contact: ☐ No

Chain-of-Custody-Record

hevron U.S.A. Inc.
O. BOX 5004
n Ramon, CA 94583
X (415)842-9591

Chevron Facility Number 9-0121
Facility Address 30260 Lakeshore Blvd, Oakland
Consultant Project Number 020204097
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord, CA 94520
Project Contact (Name) Nicole Merchant
(Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Mark Miller
(Phone) 842-8134
Laboratory Name GTEL
Laboratory Release Number 876-6900
Samples Collected by (Name) Anthony Smith
Collection Date 6/11/93
Signature Anthony Schuster

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Hold	TDS				Remarks
TB-LB	01	1	W			HCL	YES	X													Do not Bill TB-LB Page 1 of 2
3MW8	02	1			3:20											X					Contact Bills office hrs to
MW8	03	3			↓			X									X				MW-1 for 8240
3MW7	04	1			3:30											X					if a misc peak
MW7	05	3			↓			X									X				shows up in
3MW6	06	1			3:40											X					The TPH-G.
MW6	07	3	W		↓	HCL		X									X				He is expect
3MW5	08	1			3:50											X					this.
MW5	09	3			↓			X									X				
3MW4	10	1			4:00											X					SEALS INTACT
MW4	11	3			↓			X									X				ON ICE @ 3°C
3MW3	12	1			4:10											X					6/14/93 IBC
MW3	13	3	W		↓	HCL	YES	X									X				

7 day
C306 0399
see pg. 2
for add'l analysis

C30600226

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Anthony Smith	GTEL	6/14/93 0900			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time 6/14/93 0900

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 9-0121
Facility Address 3026 Lakeshore, Oakland
Consultant Project Number 020204097
Consultant Name Groundwater Technology, Inc.
Address 4057 Port Chicago Hwy, Concord, CA 94520
Project Contact (Name) Nicole Merchant
(Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name)
(Phone) 842-8134
Laboratory Name GTEL
Laboratory Release Number 876-6900
Samples Collected by (Name) Anthony Smith
Collection Date 6/11/93
Signature [signature]

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240) MTBE	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Hold	TDS				Remarks
RBMW1	14	1	W		4:20	HCL	yes									X	X				Contact Bill about 8420 for mw-1.
MW1	15	7 6	|		↓	|	|	X					⊗			X					Run 8240 if TPH-G
RBMW2	16	1	|		4:30	|	|										X				shows a misc. Peak.
MW2	17	4 3	W		↓	HCL	yes	X													SEALS INTACT ON ICE AT 3°C 6/14/93 (BEI)

C3060399

Page 2 of 2

C3060226

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	GTI	6/14/93 0920			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) [signature]		Date/Time 6/14/93 0920

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted (circled)