



Chevron U.S.A. Products Company

2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

92 FEB 12 11:51

Marketing Department

February 5, 1992

Mr. Paul Smith
Alameda County Health Care Services
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621

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

Dear Mr. Smith:

Enclosed we are forwarding the Ground Water Monitoring and Sampling Report dated January 28, 1992, prepared by our consultant Groundwater Technology, Inc. (GTI) for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline, total petroleum hydrocarbons as diesel (TPH-D) and BTEX. Benzene was detected in all the monitor wells with concentrations ranging from 770 to 4,300 ppb. In addition, elevated concentrations of TPH-D was detected in monitor well MW-2 at 38,000 ppb. Depth to ground water was measured at approximately 5 to 8-feet below grade, with a variable ground water flow direction of south-southeasterly beneath the western portion of the site and easterly beneath the eastern portion.

Groundwater Technology, Inc. is currently preparing a work plan for additional site assessment activities to delineate the extent of the hydrocarbon plume. This work plan will be submitted to you for your review and formal concurrence. The work plan will be submitted to you no later than March 1, 1992.

Chevron will continue to monitor 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) 842-9581.

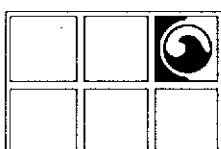
Very truly yours,
CHEVRON U.S.A. INC.


Nancy Vukelich
Environmental Engineer

Enclosures

cc: Mr. Eddy So, RWQCB-Bay Area
Ms. Sandra Lindsey, GTI-Concord
Mr. W.T. Scudder
File (9-0121Q2)





GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387

FAX: (415) 685-9148

January 28, 1992

Project No. 020302090

Ms. Nancy Vukelich
Chevron U.S.A. Inc.
P. O. Box 5004
San Ramon, CA 94583-0804

**SUBJECT: GROUNDWATER MONITORING AND SAMPLING ACTIVITIES
CHEVRON SERVICE STATION NO. 9-0121
3206 LAKESHORE AVENUE, OAKLAND, CALIFORNIA**

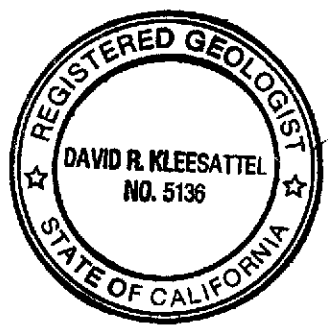
Dear Ms. Vukelich:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on January 8 and 13, 1992. The four groundwater monitoring wells at this site were gauged to determine depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments A and B, respectively. After measuring the DTW, each monitoring well was purged and sampled. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH)-as-gasoline, and TPH-as-diesel. Results of the chemical analyses are summarized in Table 1. Laboratory reports and chain-of-custody records are included in Attachment C. Monitoring well purge water was stored on site in a labeled 55-gallon. The purge water was scheduled to be removed by a Chevron-approved contractor for transport and 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.

Sandra L. Lindsey
Project Manager

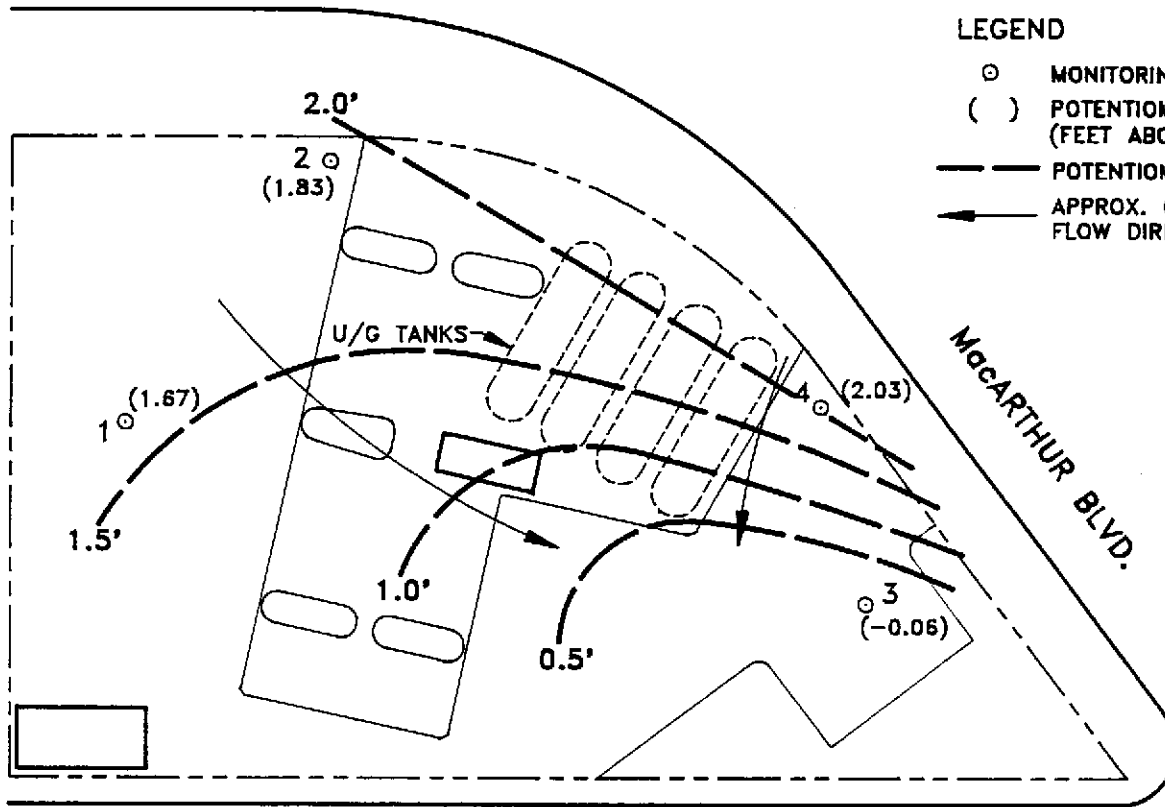


David R. Kleesattel
Registered Geologist
No. 5136

Attachments: Attachment A - Figure 1
Attachment B - Table 1
Attachment C - Laboratory Reports

LR2090A1.FH

LAKESHORE AVE.



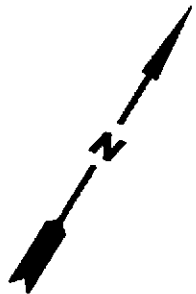
LEGEND

- MONITORING WELL
- () POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- - - POTENTIOMETRIC SURFACE CONTOUR
- ← APPROX. GROUNDWATER FLOW DIRECTION

U/G TANKS

MACARTHUR BLVD.

EXCELSIOR CT.



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

**POTENTIOMETRIC SURFACE MAP
(1/8/92)**

CLIENT: **CHEVRON U.S.A. INC.**
SERVICE STATION #9-0121

LOCATION: **3026 LAKESHORE AVENUE**
OAKLAND, CALIFORNIA

REV. NO.: **0** DATE: **1/17/92**

PM <i>SK</i>	PE/RG <i>DRK</i>	DESIGNED SL	DETAILED ML
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ACAD FILE: **PSM1892/SP1191**

PROJECT NO.: **020302090**

FIGURE: **1**

TABLE 1
GROUNDWATER WATER AND ANALYTICAL RESULTS
(Results in parts per billion)

WELL NO.	CASING ELEV.	DATE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENE	TPH-AS-GASOLINE	TPH-AS-DIESEL	DTW	SPT	GWE
M-1	6.82	08/20/91	1,700	21	220	34	5,100	260	5.20	0.00	1.62
		09/30/91	Separate-phase hydrocarbons present						5.67	SHEEN 0.00	1.15
		10/28/91							5.30	0.03	1.50
		01/08/92	770	13	95	31	5,400	-	5.15	SHEEN 0.00	1.67
		01/13/92	-	-	-	-	*4,400	-	-	-	
M-2	6.27	08/20/91	3,700	55	530	75	9,300	600	4.35	0.00	1.92
		09/30/91	2,600	47	440	68	3,500	-	4.99	0.00	1.28
		10/28/91	1,800	29	290	53	4,600	-	4.91	0.00	1.36
		01/08/92	4,300	70	<25	130	14,000	-	4.64	SHEEN 0.00	1.63
		01/13/92	-	-	-	-	-	*38,000	-	0.00	-
M-3	8.71	08/20/91	200	13	15	12	3,100	200	8.45	0.00	0.26
		09/30/91	150	8.3	13	6.7	1,000	-	8.74	0.00	-0.03
		10/28/91	120	6.7	11	7.5	1,200	-	8.76	0.00	-0.05
		01/08/92	120	.9	4.1	3.4	410	-	8.77	0.00	-0.06
		01/13/92	-	-	-	-	-	*220	-	-	-
M-4	7.37	08/20/91	870	4	3	9	1,800	160	5.05	0.00	2.32
		09/30/91	830	5.5	2.7	12	670	-	5.67	0.00	1.70
		10/28/91	990	5.8	4.8	19	2,800	-	5.81	0.00	1.56
		01/08/92	1,200	10	7	18	2,900	-	5.34	0.00	2.03
		01/13/92	-	-	-	-	-	*1,000	-	-	-

DTW = Depth to groundwater
GWE = Groundwater elevation in feet above mean sea level
SPT = Separate-phase hydrocarbon thickness
* = Diesel range concentration reported
The majority of peaks were observed in the gasoline range of the chromatogram.
- = Constituent not analyzed

ATTACHMENT C
LABORATORY ANALYTICAL REPORTS



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84768
CLIENT: GROUNDWATER TECHNOLOGIES INC.
CLIENT JOB NO.: 020301500

DATE RECEIVED: 01/08/92
DATE REPORTED: 01/13/92

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
84768- 1	TRIP BLANK	01/08/92	01/09/92
84768- 2	RBMW-3	01/08/92	01/10/92
84768- 3	MW-3	01/08/92	01/13/92
84768- 4	RBMW-4	01/08/92	/ /
84768- 5	MW-4	01/08/92	01/09/92
84768- 6	RBMW-2	01/08/92	/ /
84768- 7	MW-2	01/08/92	01/10/92
84768- 8	RBMW-1	01/08/92	/ /
84768- 9	MW-1	01/08/92	01/10/92

Laboratory Number:	84768	84768	84768	84768	84768
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	410	NA	2900
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	120	NA	1200
TOLUENE:	ND<0.5	ND<0.5	1.9	NA	10
ETHYL BENZENE:	ND<0.5	ND<0.5	4.1	NA	7
XYLENES:	ND<0.5	ND<0.5	3.4	NA	18

Laboratory Number:	84768	84768	84768	84768
	6	7	8	9

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	NA	14000	NA	5400
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	NA	4300	NA	770
TOLUENE:	NA	70	NA	13
ETHYL BENZENE:	NA	ND<25	NA	95
XYLENES:	NA	130	NA	31



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 84768

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Standard Reference: 10/04/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L
Standard Reference: 10/11/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	01/02/92	200 ng	91/93	2	70-130
Benzene	01/06/92	200 ng	100/102	2	70-130
Toluene	01/06/92	200 ng	97/99	2	70-130
Ethyl Benzene	01/06/92	200 ng	97/99	2	70-130
Total Xylenes	01/06/92	200 ng	93/95	2	70-130

Richard Srna, Ph.D.

Delomina Jangulig (for)
Laboratory Director

Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591	Chevron Facility Number <u>9-0121</u> Facility Address <u>3026 LAKESHORE</u> Consultant Project Number <u>020301500</u> Consultant Name <u>Groundwater Technology</u> Address <u>4057 Port Chicago Hwy, Concord, CA 94520</u> Project Contact (Name) <u>Sandra Lindsey</u> (Phone) <u>671-2387</u> (Fax Number) <u>685-9148</u>	Chevron Contact (Name) <u>Nancy Vukelich</u> (Phone) <u>849-9581</u> Laboratory Name <u>Superior Analytical</u> Laboratory Release Number <u>440-3170</u> Samples Collected by (Name) <u>STEVE KRANYAK</u> Collection Date <u>1-8-92</u> Signature <u>[Signature]</u>
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Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analytes To Be Performed										Remarks		
								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)					
TRIP Blank	1	1V	W	G	11:00	HCL	YES	X												
RBMW-3	2	1V						X												
MW-3	3	3V						X												
RBMW-4	4	1V																		X
MW-4	5	3V						X												
RBMW-2	6	1V																		X
MW-2	7	3V	W	G		HCL	YES	X												
RBMW1	8	1V	W	G		HCL	YES													X
MW1	9	3V	W	G	12:00	HCL	YES	X												

Please Initial: MW
 Samples Stored in ice: MW
 Appropriate containers: MW
 Samples preserved: MW
 VOA's without headspace: MW
 Comments: _____

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GTI</u>	Date/Time <u>1-8-92 1720</u>	Received By (Signature) _____	Organization _____	Date/Time _____	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received By (Signature) _____	Organization _____	Date/Time _____	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization _____	Date/Time <u>1/8/92 1720</u>	

COC-3.DWG/03 91/HCH



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • 510/ 229-1512 • fax 510/ 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 84791
CLIENT: GROUNDWATER TECHNOLOGIES INC.
CLIENT JOB NO.: 020301500-020503

DATE RECEIVED: 01/13/92
DATE REPORTED: 01/17/92

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
84791- 1	MW-1	01/13/92	01/16/92
84791- 2	MW-2	01/13/92	01/16/92
84791- 3	MW-3	01/13/92	01/15/92
84791- 4	MW-4	01/13/92	01/16/92

Laboratory Number:	84791	84791	84791	84791
	1	2	3	4

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	NA	NA	NA	NA
TPH/DIESEL RANGE:	*4400	*38000	*220	*1000
BENZENE:	NA	NA	NA	NA
TOLUENE:	NA	NA	NA	NA
ETHYL BENZENE:	NA	NA	NA	NA
XYLENES:	NA	NA	NA	NA



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

CERTIFICATE OF ANALYSIS ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 84791

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = part per billion (ppb)

* - Diesel range concentration reported. The majority of peaks were observed in the gasoline range of the chromatogram.

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L
Standard Reference: 07/20/91

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Standard Reference: 10/04/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L
Standard Reference: 10/11/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	07/20/91	200 ppm	79/90	13	75-125
Gasoline	01/02/92	200 ng	NA	NA	70-130
Benzene	01/06/92	200 ng	NA	NA	70-130
Toluene	01/06/92	200 ng	NA	NA	70-130
Ethyl Benzene	01/06/92	200 ng	NA	NA	70-130
Total Xylenes	01/06/92	200 ng	NA	NA	70-130

Richard Srna, Ph.D.

Richard Srna (for)
Laboratory Director

Chevron Facility Number 9-0121
 Facility Address 3026 Lakeshore, Oakland
 Consultant Project Number 020301500 / 020503
 Consultant Name Groundwater Technology
 Address 4057 Port Chicago Hwy, Concord, CA
 Project Contact (Name) Sandra Lindsey
 (Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Nancy Vukelich
 (Phone) 844-9581
 Laboratory Name Superior
 Laboratory Release Number 440-3170
 Samples Collected by (Name) Chris McCormack
 Collection Date 1-13-92
 Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed											Remarks
								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)				
MW-1		1	W	G			YES		X										
MW-2		1							X										
MW-3		1							X										
MW-4		1	W	G			YES		X										

Please initial:
 Samples stored in ice _____
 Appropriate containers _____
 Samples preserved _____
 VOA's without hood space _____
 Comments: _____

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GTI</u>	Date/Time <u>1/13/92/2:45</u>	Received By (Signature) _____	Organization _____	Date/Time _____	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received By (Signature) _____	Organization _____	Date/Time _____	
Relinquished By (Signature) _____	Organization _____	Date/Time _____	Received For Laboratory By (Signature) <u>FTanguilig</u>	Date/Time <u>1-13-92</u>	<u>PT</u>	