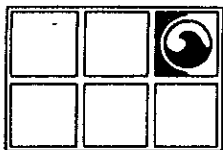


NOV 24 3 2 '93 J.M.L.L.



GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

November 23, 1993

Project No. 020204088

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

SUBJECT: *Groundwater Monitoring and Sampling Activities*
Chevron Service Station No. 9-3356
19201 Center Street, Castro Valley, California

Dear Mr. Kan:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on October 25, 1993. Three groundwater monitoring wells at the site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in the monitoring wells. A potentiometric surface map (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, xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 1. The laboratory report and chain-of-custody record are included in Attachment 3. Monitoring-well purge water was transported by Groundwater Technology 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 contact our Concord office at (510) 671-2387.

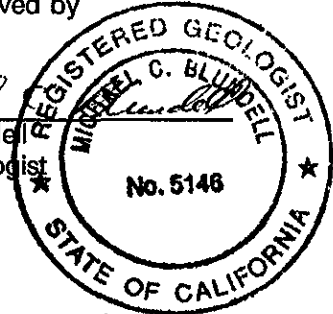
Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Groundwater Technology, Inc.
Reviewed/Approved by

Tim Watchers

Tim Watchers
Project Geologist

Michael C. Blundell
Michael C. Blundell
Registered Geologist
No. 5146



PR *Jm*
Attachment 1 Figure
Attachment 2 Table
Attachment 3 Laboratory Report

For:
Wendell W. Lattz
Vice President, General Manager
West Region

4088R043.020

ATTACHMENT 1

Figure

4088R043.020

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-3356
19201 Center Street, Castro Valley, California

Well/ID Elev	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	TOG	ORG-Pb	DTW (ft)	SPT (ft)	WTE (ft)
RINSATE	09/27/90	<50	--	--	--	--	--	--	--	--	--
	01/16/91	--	--	--	--	--	--	--	--	--	--
	09/19/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	01/23/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	04/15/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	07/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--

- TPH-G = Total petroleum hydrocarbons-as-gasoline
 TOG = Total oil and grease
 ORG-Pb = Organic lead
 -- = Not applicable/not measured/not sampled
 DTW = Depth to water
 SPT = Separate-phase hydrocarbons
 WTE = Water table elevation measure by mean sea level
 TB-LB = Laboratory trip blank
 = Gasoline range concentration reported: The pattern of peaks observed in the chromatogram shows only single peak in the gasoline range.

Data before April 1993 was provided by Alton GeoScience.



TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-3356
19201 Center Street, Castro Valley, California

Well/ID Elev	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	TOG	ORG-Pb	DTW (ft)	SPT (ft)	WTE (ft)
MW-3 284.46	09/06/89	<1.0	<0.5	<0.5	<0.5	<0.5	<1000	<50	18.73	--	265.73
	09/12/89	--	--	--	--	--	--	--	17.78	--	266.68
	11/20/89	<500	<0.3	<0.3	<0.3	<0.6	<1000	<50	17.65	--	266.81
	02/22/90	<50	<0.3	<0.3	<0.3	<0.6	<1000	<50	16.84	--	267.62
	05/29/90	<50	<0.3	<0.3	<0.3	<0.3	<1000	<50	17.13	--	267.33
	09/27/90	<50	<5	<5	<5	<5	--	--	18.38	--	266.08
	09/27/90	<50	--	--	--	--	<1000	--	18.38	--	266.08
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	18.28	--	266.18
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	18.28	--	266.18
	09/19/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	17.62	--	266.84
	01/23/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	17.62	--	266.84
	04/15/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	15.22	--	269.24
	07/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	16.66	--	267.80
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	17.57	--	266.89
	01/13/93	<50	<0.5	<0.5	<0.5	<0.5	--	--	14.12	--	270.34
	04/29/93	<50	<0.5	<0.5	<0.5	<1.5	--	--	14.04	0.00	270.42
	07/26/93	<50	<0.5	<0.5	<0.5	<1.5	--	--	15.25	0.00	269.21
10/25/93	<50	<0.5	<0.5	<0.5	<0.5	--	--	16.29	0.00	268.17	
TB-LB	11/20/89	<500	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--
	02/22/90	<50	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--
	05/29/90	<50	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--
	09/27/90	<50	--	--	--	--	--	--	--	--	--
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	09/19/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	01/23/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	04/15/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	07/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	01/13/93	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
	04/29/93	<50	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--
07/26/93	<50	<0.5	<0.5	<0.5	<1.5	--	--	--	--	--	
10/25/93	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-3356
19201 Center Street, Castro Valley, California

Well/ID Elev	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	TOG	GRG-Pb	DTW (ft)	SPT (ft)	WTE (ft)
MW-2	09/06/89	23	1	4	1	4	—	<50	13.72	—	272.44
	09/12/89	—	—	—	—	—	—	—	13.97	—	272.19
286.16	11/20/89	<50	<0.3	<0.3	<0.3	<0.6	—	—	13.81	—	272.35
	02/22/90	<50	<0.3	<0.3	<0.3	<0.6	—	<50	13.68	—	272.48
	05/29/90	<50	2	<0.3	<0.3	<0.6	—	<50	13.92	—	272.24
	09/27/90	<50	<0.3	<0.3	<0.3	<0.6	—	<50	14.75	—	271.41
	01/16/91	<50	9	<0.5	<0.5	2	—	—	14.44	—	271.72
	09/19/91	<50	<0.5	<0.5	<0.5	<0.5	—	—	14.46	—	271.70
	09/19/91	<50	<0.5	<0.5	<0.5	<0.5	—	—	14.46	—	271.70
	01/23/92	<50	<0.5	<0.5	<0.5	<0.5	—	—	14.73	—	271.43
	04/15/92	<50	<0.9	<0.5	<0.5	<0.5	—	—	13.03	—	273.13
	07/22/92	<50	<0.5	<0.5	<0.5	<0.5	—	—	13.83	—	272.33
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5	—	—	14.35	—	271.81
	01/13/93	<50	<0.5	<0.5	<0.5	<0.5	—	—	12.34	—	273.82
	04/29/93	<50	<0.5	<0.5	<0.5	<1.5	—	—	11.36	0.00	274.80
	07/26/93	30	<0.5	<0.5	<0.5	<1.5	—	—	11.00	0.00	275.16
	10/25/93	<50	<0.5	<0.5	<0.5	<0.5	—	—	11.44	0.00	274.72

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-3356
19201 Center Street, Castro Valley, California

Well/ID Elev	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	TOG	ORG-Pb	DTW (ft)	SPT (ft)	WTE (ft)
MW-1 285.22	09/06/89	<1.0	<0.5	<0.5	<0.5	<0.5	--	<50	18.25	--	266.97
	09/12/89	--	--	--	--	--	--	--	18.39	--	266.83
	11/20/89	<500	<0.3	<0.3	<0.3	<0.6	--	<50	18.06	--	267.16
	02/22/90	<50	<0.3	<0.3	<0.3	<0.6	--	<50	18.04	--	267.18
	05/29/90	<50	<0.3	<0.3	<0.3	<0.6	--	<50	18.55	--	266.67
	09/27/90	<50	<0.3	<0.3	<0.3	<0.6	--	--	19.13	--	266.09
	01/16/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	19.32	--	265.90
	09/19/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	19.36	--	265.86
	01/23/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	19.81	--	265.41
	01/23/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	19.81	--	265.41
	04/15/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	18.04	--	267.18
	07/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	18.75	--	266.47
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5	--	--	19.25	--	265.97
	01/13/93	<50	<0.5	<0.5	<0.5	0.8	--	--	17.12	--	268.10
	04/29/93	<50	<0.5	<0.5	<0.5	<1.5	--	--	15.38	0.00	269.84
07/26/93	<50	<0.5	<0.5	<0.5	<1.5	--	--	15.71	0.00	269.51	
10/25/93	<50	<0.5	<0.5	<0.5	<0.5	--	--	16.22	0.00	269.00	

ATTACHMENT 2

Table

4088R043.020

ATTACHMENT 3
Laboratory Report

4088R043.020



Superior Precision Analytical, Inc.

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

GROUNDWATER TECHNOLOGY, INC.
Attn: SANDRA LINDSEY

Project 9.3356
Reported 11/05/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
30028- 1	TB-LB	10/25/93	11/03/93 Water
30028- 2	MW-2	10/25/93	11/03/93 Water
30028- 3	MW-3	10/25/93	11/03/93 Water
30028- 4	MW-1	10/25/93	11/03/93 Water

RESULTS OF ANALYSIS

Laboratory Number: 30028- 1 30028- 2 30028- 3 30028- 4

Gasoline:	ND<50	ND<50	ND<50	ND<50
Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Toluene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Total Xylenes:	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L



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

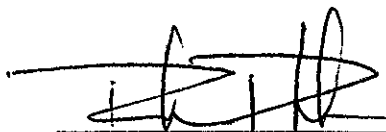
Page 2 of 2
QA/QC INFORMATION
SET: 30028

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

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	96/107	11%	70-130
Benzene:	93/92	1%	70-130
Toluene:	100/98	2%	70-130
Ethyl Benzene:	102/100	2%	70-130
Total Xylenes:	102/101	1%	70-130

 11/9/93
 Senior Chemist
 Account Advocate

