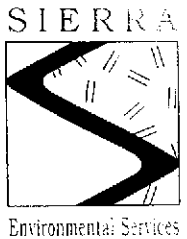


AUG 18 '93 PWM



August 11, 1993

Brett Hunter
Chevron USA
P.O. Box 5004
San Ramon, CA 94583

Re: Chevron Service Station #9-5542
7007 San Ramon Road
Dublin, California
SES Project #1-214-04

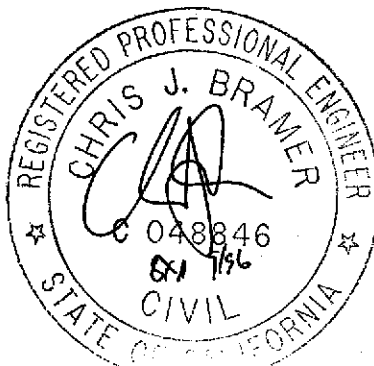
Dear Mr. Hunter:

This report presents the results of the quarterly ground water sampling at Chevron Service Station #9-5542, located at 7007 San Ramon Road in Dublin, California. Six wells, MW-2 through MW-6 and MW-8, were sampled (Figure 1).

On June 14 and July 25, 1993, SES personnel visited the site. Water level measurements were collected from six wells and all were checked for the presence of free-phase hydrocarbons. Free-phase hydrocarbons were not present in any of the site wells. Water level data are shown in Table 1 and ground water elevation contours are included on Figures 1 and 2.


The ground water samples were collected on July 25, 1993 in accordance with SES Standard Operating Procedure - Ground Water Sampling (attached). All analyses were performed by GTCL of Concord, California. Analytic results for ground water are presented in Table 2. The chain of custody document and laboratory analytic reports are attached. SES is not responsible for laboratory omissions or errors.

Thank you for allowing us to provide services to Chevron. Please call if you have any questions.



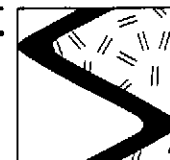
Sincerely,
Sierra Environmental Services


Richard E. Hilton
Staff Environmental Scientist


Chris J. Bramer
Professional Engineer #C48846

REH/CJB/mc
21404QM.AU3

Attachments: Figures
Tables
SES Standard Operating Procedure
Chain of Custody Document and Laboratory Analytic Reports



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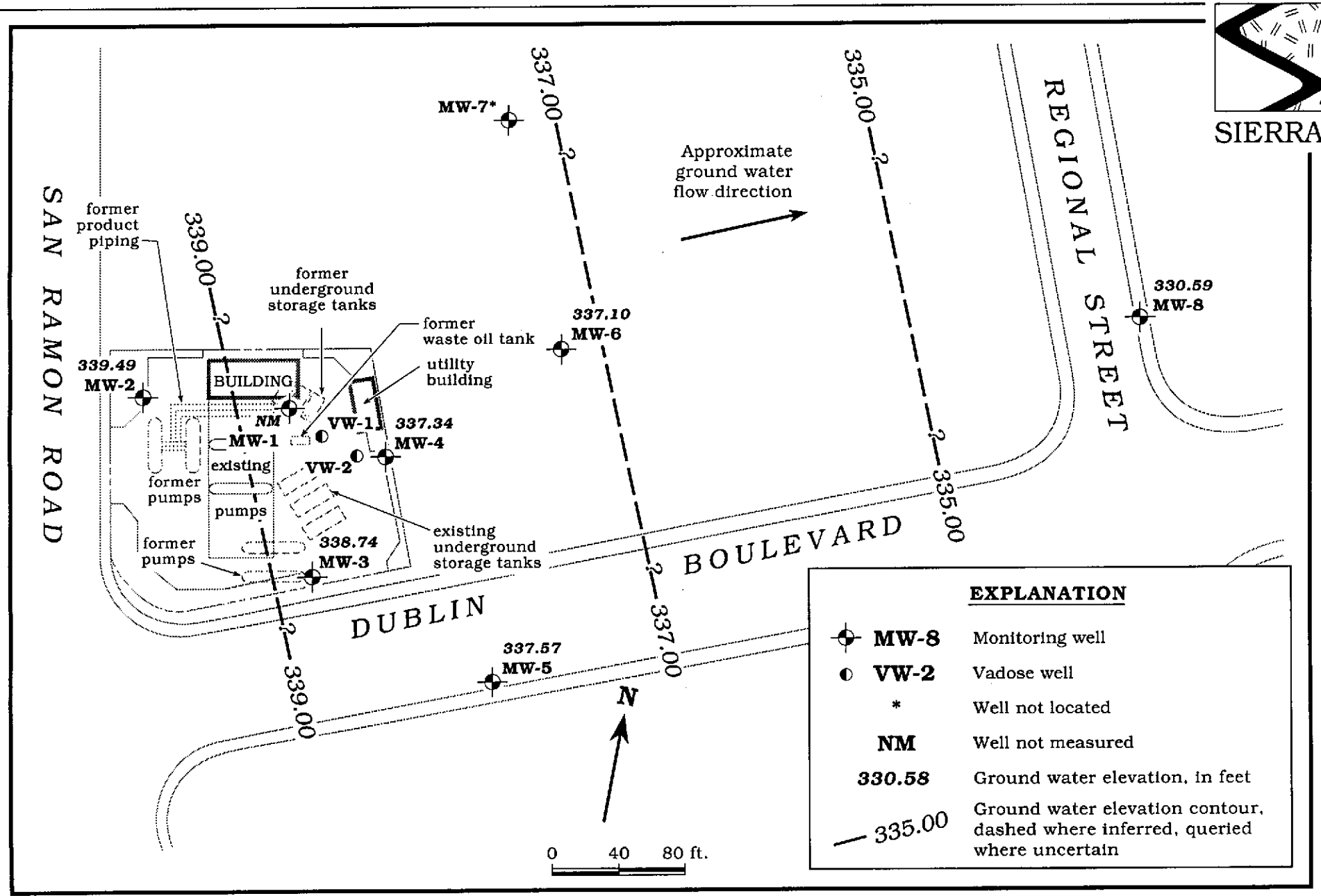
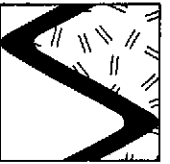


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - June 14, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California



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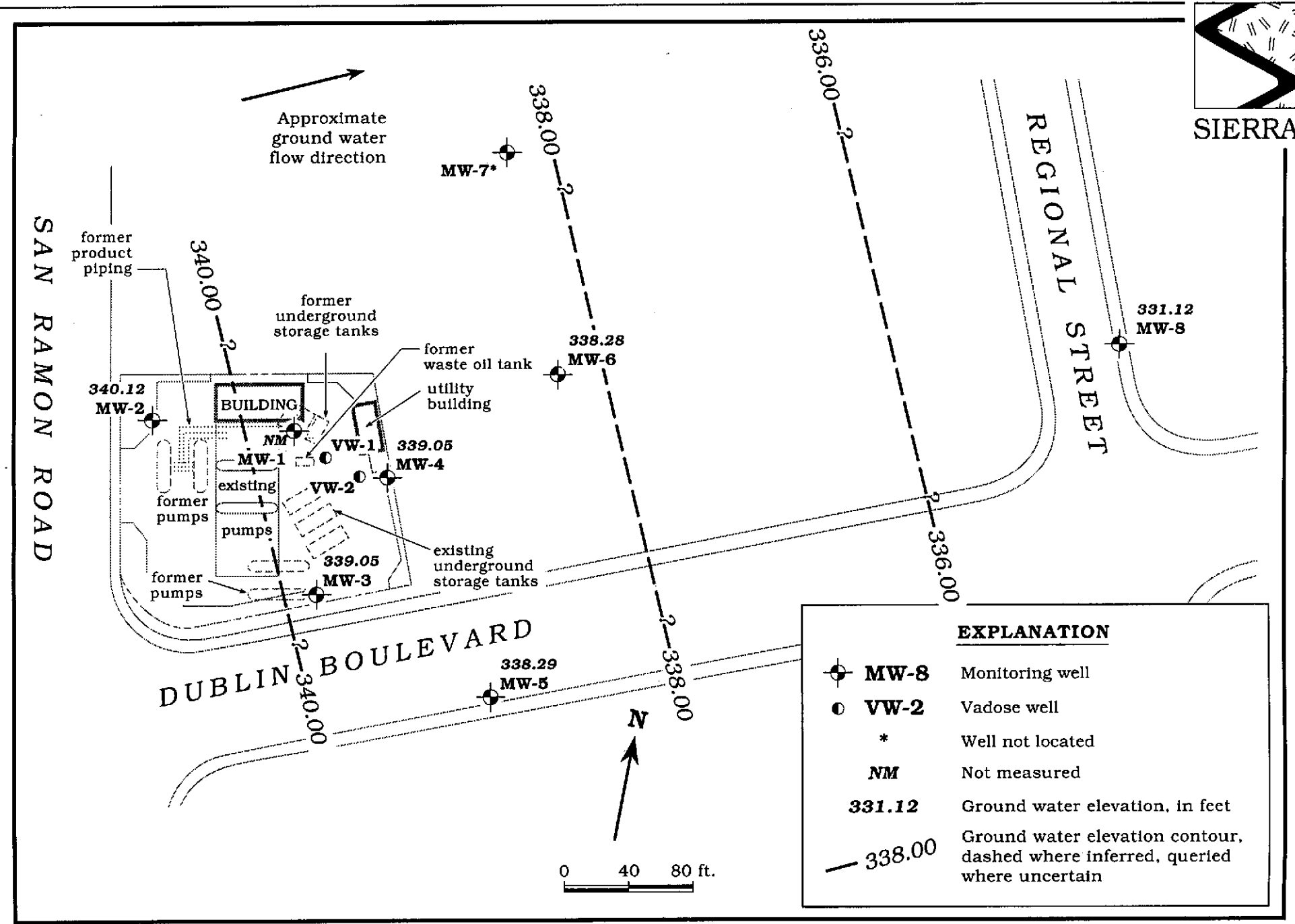
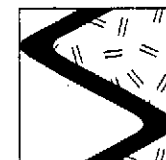


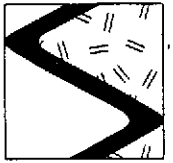
Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - July 25, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California



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Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

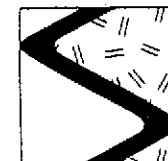
Well ID	Date Measured	DTW (ft)	TOC (msl)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
						-----feet below grade----->		
MW-1	5/31/91	25.67	363.98 ¹	338.31	0	20.0 - 35.0	19.5 - 35.5	0 - 19.5
	6/21/91	26.23		337.75	0			
	7/17/91	26.53		337.45	0			
	10/4/91	27.90		336.08	0			
	12/19/91	28.12		335.86	0			
	3/19/92	24.63		339.35	0			
	6/19/92	26.23	364.32 ²	338.09	0			
	9/22/92	27.73		336.59	0			
	12/18/92	26.76		337.56	0			
	3/22/93 ⁴	---		---	---			
	6/14/93 ⁴	---		---	---			
	7/25/93 ⁴	---		---	---			
MW-2	5/31/91	25.51	364.19 ¹	338.68	0	22.0 - 37.0	20.0 - 37.0	0 - 20.0
	6/21/91	26.13		338.06	0			
	7/17/91	26.46		337.73	0			
	10/4/91	27.79		336.40	0			
	12/19/91	28.06		336.13	0			
	3/19/92	24.46		339.73	0			
	6/19/92	26.10	364.64 ²	338.54	0			
	9/22/92	27.60		337.04	0			
	12/18/92	26.32		338.32	0			
	3/22/93	21.39		343.29	0			
	6/14/93	25.15		339.49	0			
	7/25/93	24.52		340.12	0			
MW-3	5/31/91	23.20	361.92 ¹	338.72	0	20.0 - 35.0	19.0 - 35.0	0 - 19.0
	6/21/91	24.13		337.79	0			
	7/17/91	24.59		337.73	0			
	9/20/91	25.98		335.94	0			
	12/19/91	26.24		335.68	0			
	3/19/92	22.46		339.46	0			
	6/19/92	24.32	362.26 ²	337.94	0			
	9/22/92	25.84		336.42	0			
	12/18/92	24.40		337.86	0			
	3/22/93	19.72		342.54	0			
	6/14/93	23.52		338.74	0			
	7/25/93	23.21		339.05	0			
MW-4	5/31/91	24.67	362.70 ¹	338.03	0	20.0 - 35.0	19.0 - 35.0	0 - 19.0
	6/21/91	25.31		337.39	0			
	7/17/91	25.73		336.97	0			



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Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (msl)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval
MW-4 (cont)	10/4/91	27.08		335.62	0			
	12/19/91	27.24		335.46	0			
	3/19/92	23.66		339.04	0			
	6/19/92	25.33	363.07 ²	337.74	0			
	9/22/92	26.90		336.17	0			
	12/18/92	25.62		337.45	0			
	3/22/93	20.80		342.27	0			
	6/14/93	25.73		337.34	0			
	7/25/93	24.02		339.05	0			
MW-5	6/21/91	23.17	359.95 ¹	336.78	0	21.0 - 36.0	19.5 - 36.0	0 - 19.5
	7/17/91	23.68		336.27	0			
	10/4/91	25.20		334.75	0			
	12/19/91	25.20		334.75	0			
	3/19/92	21.21		338.74	0			
	6/19/92	23.42	360.28 ²	336.86	0			
	9/22/92	24.97		335.31	0			
	12/18/92	23.52		336.76	0			
	3/22/93	19.10		341.18	0			
	6/14/93	22.71		337.57	0			
	7/25/93	21.99		338.29	0			
MW-6	6/21/91	23.55	360.22 ¹	336.67	0	20.0 - 35.0	18.5 - 35.0	0 - 18.5
	7/17/91	24.00		336.22	0			
	10/4/91	25.29		334.93	0			
	12/19/91	25.34		334.88	0			
	3/19/92	22.05		338.17	0			
	6/19/92	23.52	360.58 ²	337.06	0			
	9/22/92	25.60		334.98	0			
	12/18/92	24.18		336.40	0			
	3/22/93	19.36		341.22	0			
	6/14/93	23.48		337.10	0			
	7/25/93	22.30		338.28	0			
MW-7	6/21/91	23.45	360.63 ¹	337.18	0	20.0 - 35.0	18.5 - 35.0	0 - 18.5
	7/17/91	23.90		336.73	0			
	10/4/91	25.03		335.60	0			
	12/19/91	25.10		335.53	0			
	3/19/92	22.74		337.89	0			
	6/19/92 ³	---	360.99 ²	---	---			
	9/22/92 ³	---		---	---			



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Table 1. Water Level Data and Well Construction Details - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California (continued)

Well ID	Date Measured	DTW (ft)	TOC (msl)	GWE (msl)	Product Thickness* (ft)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval	feet below grade	
MW-7 (cont)	12/18/92 ³	---		---	---					
	3/22/93 ⁵	---		---	---					
	6/14/93 ⁵	---		---	---					
	7/25/93 ⁵	---		---	---					
MW-8	12/12/91	22.54	---	---	0	---	---	---		
	6/19/92	20.47	354.89 ²	334.42	0					
	9/22/92	29.80		325.09	0					
	12/18/92	21.18		333.71	0					
	3/22/93	16.91		337.98	0					
	6/14/93	24.30		330.59	0					
	7/25/93	23.77		331.12	0					

EXPLANATION:

DTW = Depth to water
 TOC = Top of casing elevation
 GWE = Ground water elevation
 msl = Measurements referenced relative to mean sea level
 --- = Not available/not applicable

NOTES:

Well construction details for MW-1 through MW-4 were compiled from a draft report prepared by Chempro, undated.

* Product thickness was measured with an MMC flexi-dip interface probe.

¹ Top of casing elevations for monitoring wells MW-1 through MW-7 were surveyed by Ron Miller, Professional Engineer #15816 on June 26, 1991.

² Top of casing elevations for monitoring wells MW-1 through MW-8 were surveyed by Kier & Wright of Pleasanton, California on December 12, 1991. Survey data received by SES on April 30, 1992.

³ Well could not be located on this date due to surface conditions from recent discing.

⁴ Monitoring well inaccessible due to downhole equipment, therefore no water level measurement was collected.

⁵ Monitoring well not located since March 1992 sampling event.

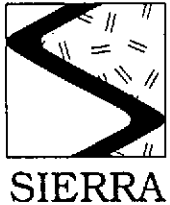


Table 2. Analytic Results for Ground Water - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California (continued)

EXPLANATION:

TPPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
O&G = Oil and Grease
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
HVOCs = Halogenated Volatile Organic Compounds
1,2-DCA = 1,2-Dichloroethane
EDB = Ethylene dibromide
OL = Organic lead
ppb = Parts per billion
D = Duplicate sample
--- = Not analyzed/not applicable
ND = Not detected (see notes)

ANALYTIC METHODS:

8015 = EPA Method 8015/5030 for TPPH(G)
602 = EPA Method 602 for BTEX
504 = EPA Method 504 for EDB
8020 = EPA Method 8020 for BTEX
8010 = EPA Method 8010 for HVOCs
503E = Standards Methods Method 503E for O&G

ANALYTIC METHODS: (continued)

413.1 = EPA Method 413.1 for total O&G
624 = EPA Method 624 for BTEX and VOCs
5520 = Standard Methods Method 5520 for O&G
LUFT = DHS LUFT Manual Method for OL

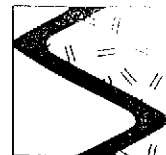
ANALYTIC LABORATORIES:

SAL = Superior Analytic Laboratory, Inc. of San Francisco and Martinez, California
SPA = Superior Precision Analytical, Inc. of San Francisco and Martinez, California
GTEL = Groundwater Technology Environmental Laboratory, Inc., of Concord, California

NOTES:

Analytic data was compiled from a draft report prepared by Chempro, undated.

- * Analytic laboratory was not shown.
- ** 624 compounds other than BTE were not reported
- ¹ Other HVOCs were not detected at detection limits ranging from 0.5 to 1 ppb.
- ² Chloroform and bromodichloromethane were detected at 1.3 and 0.9 ppb, respectively. Other HVOCs were not detected at detection limits ranging from 0.5 to 1 ppb.
- ³ A non-standard gasoline pattern was observed in the chromatogram.
- ⁴ This well could not be located; therefore it was not sampled.
- ⁵ Gasoline range concentration reported. The chromatogram shows only a single peak in the gasoline range.
- ⁶ Monitoring well deleted from sampling program per Chevron Project Engineer.
- ⁷ Monitoring well not located since March 1992 sampling event.
- ⁸ Uncategorized compound not included in gasoline total.



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SES STANDARD OPERATING PROCEDURE GROUND WATER SAMPLING

The following describes sampling procedures used by SES field personnel to collect and handle ground water samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis. Wells will be sampled no less than 24 hours after well development. Collection methods specific to ground water sampling are presented below.

Prior to sampling, each well is checked for the presence of free-phase hydrocarbons using an MMC flexi-dip interface probe. Product thickness (measured to the nearest 0.01 foot) is noted on the sampling form. Water level measurements are also made using either a water level meter or the interface probe. The water level measurements are also noted on the sampling form.

Prior to sampling, each well is purged of a minimum of three well casing volumes of water using a steam-cleaned PVC bailer, or a pre-cleaned pump. Temperature, pH and electrical conductivity are measured at least three times during purging. Purging is continued until these parameters have stabilized (i.e., changes in temperature, pH or conductivity do not exceed $\pm 0.5^{\circ}\text{F}$, 0.1 or 5%, respectively).

The purge water is taken to Chevron's Richmond Refinery for disposal.

Ground water samples are collected from the wells with steam-cleaned Teflon bailers. The water samples are decanted into the appropriate container for the analysis to be performed. Pre-preserved sample containers may be used or the analytic laboratory may add preservative to the sample upon arrival. Duplicate samples are collected from each well as a back-up sample and/or to provide quality control. The samples are labeled to include the project number, sample ID, date, preservative, and the field person's initials. The samples are placed in polyethylene bags and in an ice chest (maintained at 4°C) for transport under chain of custody to the laboratory.

The chain of custody form includes the project number, analysis requested, sample ID, date analysis and the SES field person's name. The form is signed and dated (with the transfer time) by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.

A trip blank and bailer blank accompanies each sampling set, or 5% trip blanks and 5% bailer blanks are included for sets of greater than 20 samples. The bailer blank is prepared by pouring previously boiled water into a steam-cleaned Teflon bailer prior to sampling a well. The trip and bailer blanks are analyzed for some or all of the same compounds as the ground water samples.



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: SIE01CHV08
Consultant Project Number: 1-214-04
Facility Number: 9-5542
Project ID: 7007 San Ramon Valley RD.
Dublin, CA
Work Order Number: C3-07-0411

August 6, 1993

Argy Mena
Sierra Environmental Services
P.O. Box 2546
Martinez, CA 94553

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 07/27/93.

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
Laboratory Director

Client Number: SIE01CHV08
 Consultant Project Number: 1-214-04
 Facility Number: 9-5542
 Project ID: 7007 San Ramon Valley RD.
 Dublin, CA
 Work Order Number: C3-07-0411

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		TB-LB	BB	MW-8	MW-5
Date Sampled		07/25/93	07/25/93	07/25/93	07/25/93
Date Analyzed		08/03/93	08/03/93	08/03/93	08/03/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5	<0.5	<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	--	--	--	--	--
TPH as Gasoline	50	<50	<50	<50	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		88.2	84.7	87.3	86.5

- 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%.

Client Number: SIE01CHV08
 Consultant Project Number: 1-214-04
 Facility Number: 9-5542
 Project ID: 7007 San Ramon Valley RD.
 Dublin, CA
 Work Order Number: C3-07-0411

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		05	06	07	08
Client Identification		MW-2	MW-3	MW-6	MW-4
Date Sampled		07/25/93	07/25/93	07/25/93	07/25/93
Date Analyzed		08/04/93	08/04/93	08/04/93	08/04/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	19	<0.5	18000
Toluene	0.5	<0.5	6	<0.5	30000
Ethylbenzene	0.5	<0.5	2	<0.5	2400
Xylene, total	0.5	<0.5	5	<0.5	14000
BTEX, total	--	--	32	--	64000
TPH as Gasoline	50	<50	1200	83*	94000
Detection Limit Multiplier		1	1	1	100
BFB surrogate, % recovery		86.7	113	84.8	93.3

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 compounds are not included in gasoline hydrocarbon total.

Client Number: SIE01CHV08
 Consultant Project Number: 1-214-04
 Facility Number: 9-5542
 Project ID: 7007 San Ramon Valley RD.
 Dublin, CA
 Work Order Number: C3-07-0411

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		Q979383-1			
Client Identification		METHOD BLANK			
Date Sampled		--			
Date Analyzed		08/03/93			
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5			
Toluene	0.5	<0.5			
Ethylbenzene	0.5	<0.5			
Xylene, total	0.5	<0.5			
BTEX, total	--	--			
TPH as Gasoline	50	<50			
Detection Limit Multiplier		1			
BFB surrogate, % recovery		99.4			

- 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%.

Client Number: SIE01CHV08
 Consultant Project Number: 1-214-04
 Facility Number: 9-5542
 Project ID: 7007 San Ramon Valley Rd.
 Dublin, CA
 Work Order Number: C3-07-0411

Table 1

ANALYTICAL RESULTS

**Total Oil and Grease in Water
 by Infrared Spectrometry**

EPA Method 413.2¹(SM 5520 C²)

1. Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-202, Revised March 1983, U.S. Environmental Protection Agency.
2. Standard Methods for the Examination of Water and Wastewater, 17th ed., 1989, American Public Health Association.

GTEL Sample Number		08	072893 TPH		
Client Identification		MW-4	METHOD BLANK		
Date Sampled		07/25/93	--		
Date Prepared		07/28/93	07/28/93		
Date Analyzed		07/28/93	07/28/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Total Oil and Grease	5000	<5000	<5000		
Detection Limit Multiplier		1	1		

Client Number: SIE01CHV08
Consultant Project Number: 1-214-04
Facility Number: 9-5542
Project ID: 7007 San Ramon Valley RD.
Dublin, CA
Work Order Number: C3-07-0411

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	C3070399-02	20.0	ug/L	88.0	89.5	1.7	55 - 129
Toluene	C3070399-02	20.0	ug/L	98.5	101	2.0	72 - 149
Ethylbenzene	C3070399-02	20.0	ug/L	91.0	92.0	1.1	75 - 138
Xylene, total	C3070399-02	60.0	ug/L	93.7	95.2	1.6	74 - 147

