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By Alameda County Environmental Health at 2:38 pm, Sep 09, 2013



Catalina Espino DevineProject Manager
Marketing Business Unit

Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 790-3949 Espino@Chevron.com

September 6, 2013

Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Chevron Facility # 95542

Address: 7007 San Ramon Road, Dublin, CA

I have reviewed the attached report titled <u>Addendum to Site Conceptual Model and Low-Threat Closure Request</u> and dated <u>July 13, 2013</u>.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga-Rovers & Associates, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Catalina Espino Devine Project Manager

Enclosure: Report



10969 Trade Center Drive, Suite 107 Rancho Cordova, California 95670

Telephone: (916) 889-8900 Fax: (916) 889-8999

http://www.craworld.com

September 6, 2013

Reference No. 611969D

Ms. Dilan Roe, P.E. Alameda County Environmental Health (ACEH) 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Addendum to Site Conceptual Model and Low-Threat Closure Request

Chevron Service Station 95542

7007 San Ramon Road Dublin, California Case No. RO0000206

Dear Ms. Roe:

Conestoga-Rovers & Associates (CRA) is submitting this Addendum to Site Conceptual Model and Low-Threat Closure Request for the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (Chevron). On February 26, 2013, CRA submitted an Addendum to Case Closure Request in which case closure was requested in accordance with the general and media-specific criteria outlined in the State Water Resources Control Board (SWRCB) Low-Threat Underground Storage Tank Case Closure Policy (LTCP). In a letter dated May 7, 2013 (Attachment A), ACEH denied case closure on the basis that site conditions failed to meet LTCP General Criteria (e) (a conceptual site model that assesses the nature, extent, and mobility of the release has been developed) and the media-specific criteria for groundwater. Specifically, the site data as presented in the February 26, 2013 report and the August 17, 2009 Site Conceptual Model and Additional Investigation Work Plan (SCM) failed to adequately support the characteristics of groundwater-specific criteria Class (4), which the site was identified as satisfying.

As a result, ACEH, Chevron and CRA discussed ACEH's technical comments and the additional information necessary to support low-threat case closure during conference calls on May 15 and August 12, 2013. As agreed, CRA prepared this addendum to address those comments (Technical Comments 1 and 2), and provide the *List of Landowners Form*.

Equal Employment Opportunity Employer



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SITE GROUNDWATER MONITORING WELL NETWORK

The characteristics of LTCP groundwater-specific criteria Class (4) are as follows:

- The contaminant plume that exceeds water quality objectives (WQOs) is less than 1,000 feet in length.
- There is no free product.
- The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary.
- Dissolved concentrations of benzene and methyl tertiary butyl ether (MTBE) are less than 1,000 micrograms per liter (μ g/L).

In Technical Comments 1 and 2 of the May 7, 2013 letter, ACEH expressed concern that the most recently used monitoring well network consisting of wells MW-1, MW-4, and MW-11 was inadequate for determining the extent, stability, gradient, and length of the plume, in addition to the validity of dissolved concentrations. Groundwater sampling has not been performed at the site since third quarter 2010 as it was subsequently suspended with ACEH approval. Since 2006, only wells MW-1, MW-4, and MW-11 have been sampled; wells MW-6 through MW-10 (Figure 2) were destroyed at that time with ACEH approval due to proposed redevelopment of the adjacent property and the perimeter wells were no longer needed. It should be noted that gauging and sampling of wells MW-2 and MW-3 was discontinued in 1999, but gauging of these wells was resumed in 2009.

ACEH stated that groundwater elevation and analytical data needed to be validated from MW-1 since it appeared inadequately screened and consistently submerged based on historical depth to water measurements. Well MW-1 is located in the former source area (former gasoline underground storage tanks [USTs]) and was originally installed in 1990 with a screened interval of 20 to 35 feet below grade (fbg) (Table 1). In November 1992, the well was deepened for extraction purposes and screened from 30 to 50 fbg. Since that time, the measured depth to water has ranged from 21.99 to 27.44 feet below top of casing (TOC), similar to site monitoring wells that were screened across the water table. Dissolved hydrocarbon concentrations in well MW-1 are stable and within historical ranges following completion of oxygen injection activities in 2008, and final dissolved benzene and MTBE concentrations detected in the well were below the screening limits of Class (4) LTCP groundwater-specific criteria. Historical groundwater monitoring data is included as Attachment B. We agree with ACEH that well MW-1 is screened below the water table due to historical groundwater extraction use.



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ACEH noted that well MW-4 appears to be screened across the historic smear zone. Therefore, dissolved hydrocarbon concentrations and groundwater elevation data collected from this well are representative of water table conditions.

Well MW-11 is a deeper well (screened from 45 to 55 fbg) installed to monitor deeper groundwater downgradient. As MW-11 is screened deeper, the validity of this well for purposes of defining the status of the plume was questioned. As ACEH indicates in the letter, MW-11 was installed in 2006 to monitor dissolved hydrocarbon concentrations in a deeper water-bearing zone identified by deeper grab-groundwater samples from soil boring CPT-2. Analytical data collected from well MW-11 from 2006 to 2010 indicates no dissolved hydrocarbon concentrations of concern are present in groundwater in the deeper zone, downgradient of the site. Additionally, historical analytical data collected from well MW-10, located in the vicinity of MW-11, screened across the water table, and destroyed in 2006, previously defined the extent of the dissolved hydrocarbon plume in shallow groundwater, downgradient of the site. It is CRA's position that data collected from well MW-11, taken together with historical data from well MW-10, effectively define the downgradient extent of dissolved hydrocarbons in groundwater emanating from the site. Historical groundwater monitoring data are included as Attachment B.

Dissolved Hydrocarbon Distribution in Groundwater

To further assess dissolved hydrocarbon concentrations in groundwater, CRA plotted dissolved TPHg, benzene, and MTBE concentrations over time in wells both screened across the water table and in line with groundwater flow direction from the source area near well MW-1 to the east. Wells MW-4, MW-6, MW-8, MW-9, and MW-10 were all screened across the water table and are located downgradient of the source area. Hydrocarbon versus time graphs plotted for these wells show a consistent, decreasing trend for all constituents graphed, indicating the dissolved hydrocarbon plume is decreasing in size. Well construction specifications are presented on Table 1, well locations are shown on Figure 2, and dissolved hydrocarbon concentrations over time are presented in Attachment D.

As mentioned previously, the downgradient extent of hydrocarbons in shallow groundwater is adequately defined by former well MW-10 and also by former well MW-8, in which petroleum hydrocarbons generally were not detected with the exception of one anomalous event each. Although in Technical Comment 1 ACEH suggested that the one-time elevated detections of TPHg and benzene in MW-10 in 1999 indicated the plume had migrated offsite, this was the only event over 9 years of monitoring that TPHg and benzene were detected in this well. In the 5 years of monitoring following the 1999 hydrocarbon detections, no TPHg or BTEX were detected in MW-10 indicating that these one-time detections were anomalous and the plume



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did not migrate to that well (Attachment B). A similar phenomenon was observed in MW-8 in 1994 with a subsequent event three weeks later showing no detected concentrations. Petroleum hydrocarbons also were not detected (except for 3.1 ug/L toluene) in the groundwater sample collected in 1995 from boring SB-3 drilled near MW-10 (Table 2). Therefore, the extent of shallow hydrocarbons is adequately defined downgradient of the site by data from wells MW-8 and MW-10, and deeper hydrocarbons are defined by analytical data from well MW-11.

Technical item number 2 of ACEH's letter briefly mentions the screened intervals of the most current monitoring well network potentially affecting the measured plume gradient. Wells MW-1, MW-4, and MW-11, although screened at various depths, are either fully or at least partially screened within the finer grained soil that predominantly underlies the site, and therefore likely monitor the same water-bearing zone. However, even if we assume wells MW-1 and MW-11 do not monitor the same groundwater zone, there is ample data prior to, and following, the deepening of well MW-1, and prior to the installation of well MW-11, to show an overall easterly groundwater flow direction. Copies of historical potentiometric maps prior to the installation of MW-11 in 2006 are included as Attachment C; also see the rose diagram on Figure 2. An easterly flow direction was also observed at the nearby Shell facility at 11989 Dublin Boulevard. Therefore, regardless of the inclusions of data from wells MW-1 and MW-11, the overall groundwater flow direction is well-established to determine plume definition.

Accordingly, regarding the calculation of the length of the plume that exceeds WQOs, well MW-10, which conservatively defines the furthest downgradient extent of the plume, is approximately 300 feet from MW-1, and well MW-8 is approximately 500 feet from MW-1. Thus the overall plume length is well within the 1,000-foot length limit required to satisfy groundwater-specific criteria Class 4.



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Hydrocarbon Distribution in Soil

During a telephone conversation on August 12, 2013, ACEH requested CRA clarify that laboratory reporting or detection limits of semi-volatile organic compounds (SVOCs) (notably the seven priority polycyclic aromatic hydrocarbons (PAHs) that include benzo[a]anthracene, benzo[b]fluoranthene, benzo[b]fluoranthene, benzo[b]fluoranthene, <a href="mailto:benzo[b]fluoranthene, <a href="mailto:benzo[a]anthracene, and <a href="mailto:indenzo[a]anthracene, and <a href="mailto:indenzo[a]anthracene, and <a href="indenzo[a]anthracene, and <a href="indenzo[a]anthracene, <a href="mailto:benzo[a]anthracene, <a href="mailto:b

CONCLUSIONS AND RECOMMENDATIONS

This addendum was prepared to address concerns outlined by ACEH during conference calls pertaining to LTCP on May 15 and August 12, 2013. Additional information provided in this addendum indicates the following:

- The most recent groundwater monitoring well network, when considered with historical groundwater data, was effective in monitoring dissolved hydrocarbon concentrations emanating from the site and defining the extent of the dissolved hydrocarbon groundwater plume.
- The groundwater plume is adequately defined, the groundwater gradient is well
 established, the plume is shrinking in size, and dissolved concentrations are below LTCP
 screening levels. Therefore, site conditions meet the characteristics of LTCP
 groundwater-specific criteria Class 4.
- No priority PAHs or other constituents of concern were detected in site soils and historical laboratory detection limits were clarified.

Additional information was presented to further clarify the SCM for the site and as such, LTCP General Criteria (e) is satisfied. Based on the information presented above, site conditions meet groundwater-specific criteria Class 4 and low-threat closure is warranted. A County of



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Alameda "List of Landowners" was provided under separate cover, as requested. Therefore, on behalf of Chevron, CRA respectfully requests ACEH grant case closure.

We appreciate your assistance on this project and look forward to your reply. Please contact Morgan Hargrave at (530) 553-4136 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Morgan Hargrave

Greg Barclay, PG 6260

JK/de/12 Encl.

Figure 1 Vicinity Map Figure 2 Site Plan

Table 1 Well Construction Details

Table 2 Historical Grab-Groundwater Sample Analytical Results

Table 3 Historical Soil Sample Analytical Results

Attachment A ACEH Letter dated May 7, 2013 Attachment B Groundwater Monitoring Data Attachment C Historical Potentiometric Maps

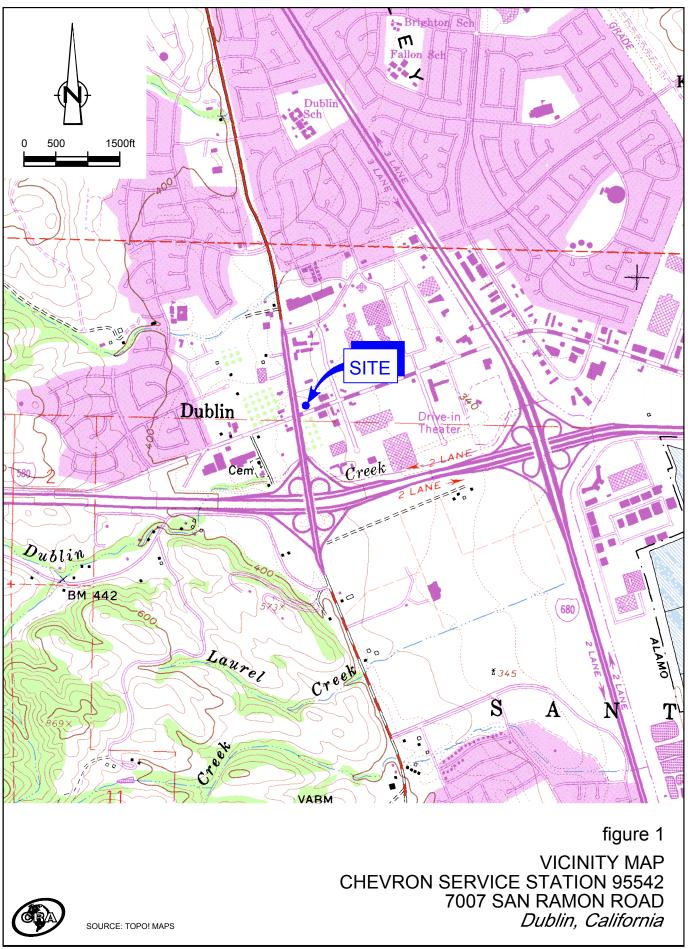
Attachment D Hydrocarbon Concentration versus Time Graphs

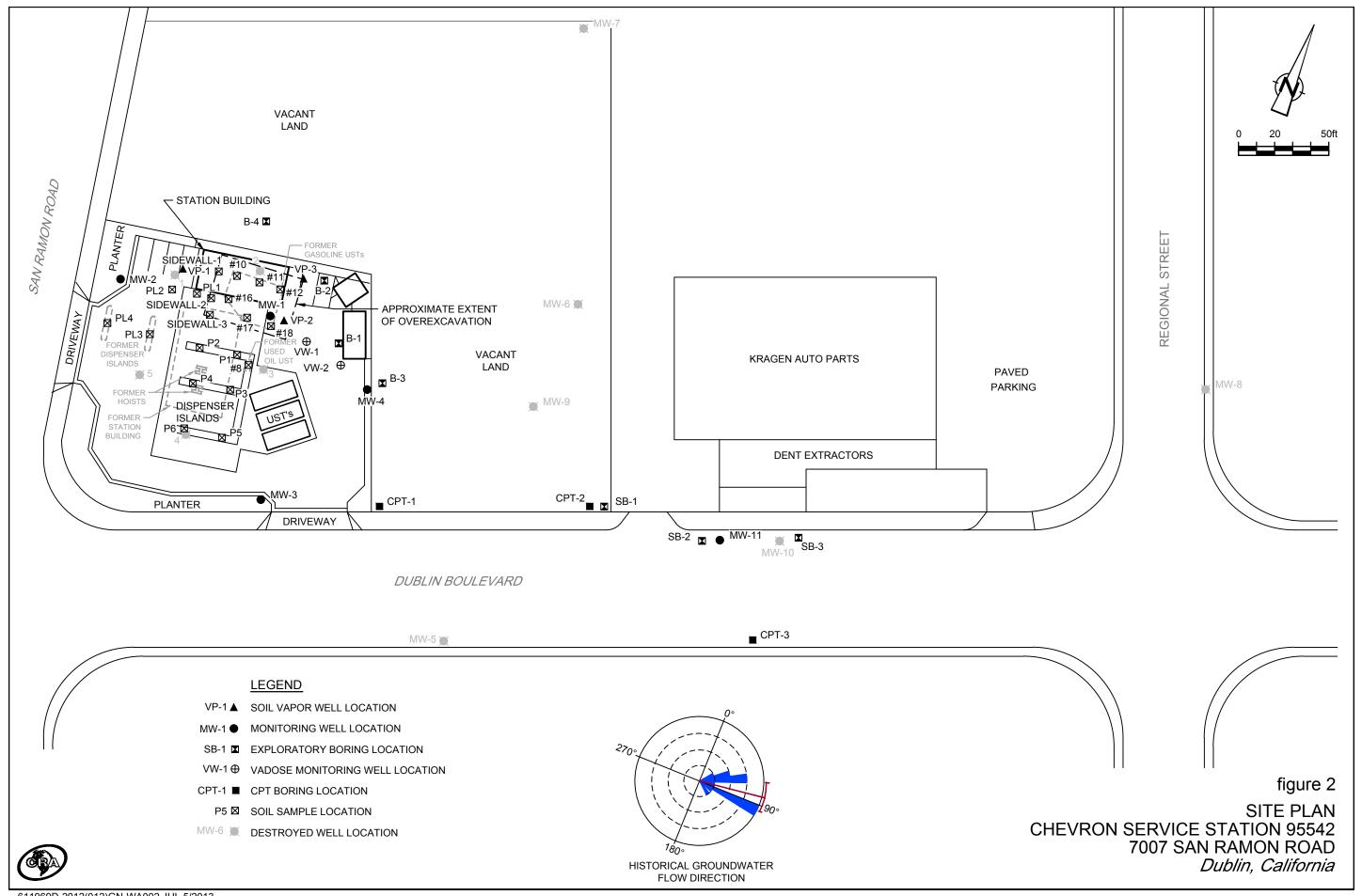
Attachment E Laboratory Reports

cc: Ms. Catalina Espino Devine, Chevron (electronic copy)

Mr. Tim Johnson, property owner

FIGURES





TABLES

TABLE 1 WELL CONSTRUCTION DETAILS CHEVRON SERVICE STATION 95542 7007 SAN RAMON ROAD, DUBLIN, CALIFORNIA

		И	Tell .	Sc	reen	Screen	
Boring	Installation	Depth	Diameter	Top	Bottom	Length	Status
ID	Date	(fbg)	(inches)	(fbg)	(fbg)	(feet)	
MW-1	03/27/90	35	2	20	35	15	Overdrilled to new depth
MW-1	11/25/92	51.5	4	30	50	20	Active
MW-2	03/26/90	37	2	22	37	15	Active
MW-3	03/26/90	35	2	20	35	15	Active
MW-4	03/28/90	35	2	20	35	15	Active
MW-5	06/11/91	36	2	21	36	15	Paved Over in 1995 / Inactive
MW-6	06/11/91	35	2	20	35	15	Properly Destroyed in January 2006
MW-7	06/12/91	35	2	20	35	15	Properly Destroyed in January 2006
MW-8	12/06/91	35	2	15	35	20	Properly Destroyed in January 2006
VW-1	11/24/92	31.5	2	25	30	5	Inactive
VW-2	11/25/92	30	2	25	29.5	4.5	Inactive
MW-9	06/08/94	34.5	2	19	34.5	15.5	Properly Destroyed in January 2006
MW-10	06/12/96	35	2	15	35	20	Properly Destroyed in January 2006
MW-11	11/30/06	55	2	45	55	10	Active

fbg = feet below grade

TABLE 2 HISTORICAL GRAB-GROUNDWATER SAMPLE ANALYTICAL RESULTS CHEVRON SERVICE STATION 95542 7007 SAN RAMON ROAD DUBLIN, CALIFORNIA

Boring	Sample Depth (fbg)	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA μg/L	EDB µg/L
SB-1		7/12/95	65,000	470	200	210	2,100	NA	NA	NA	NA	NA	NA	NA
SB-2		7/12/95	2,900	<5.0	<5.0	72	52	NA	NA	NA	NA	NA	NA	NA
SB-3		7/12/95	<50	<0.5	3.1	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA
B-3		6/12/96	63,000	5,600	2,900	1,800	7,900	NA	NA	NA	NA	NA	NA	NA
B-4		6/12/96	<50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA	NA
CPT-1	46 55 65	1/20/06 1/20/06 1/20/06	<50 <50 <50	<0.5 <0.5 <0.5	<5 <5 <5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5							
CPT-2	52 63	1/20/06 1/20/06	1,000 170	1 <0.5	<0.5 <0.5	22 1	120 2	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<5 <5	<0.5 <0.5	<0.5 <0.5
CPT-3	42 55 65	1/17/06 1/17/06 1/17/06	<50 <50 <50	<3 <0.5 <0.5	<25 <5 <5	3 <0.5 <0.5	<3 <0.5 <0.5							

Abbreviations/Notes

TPHg = total petroleum hydrocarbons as gasoline

MTBE = methyl tertiary butyl ether

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

TAME = tertiary amyl methyl ether

TBA = tertiary butyl alcohol

1,2-DCA = 1,2-dichloroethane

EDB = 1,2-dibromoethane

<x = not detected at or above stated laboratory reporting limit</p>

fbg = feet below grade

ug/L = micrograms per liter

NA = Not analyzed

Boring/ Sample ID	Depth (fbg)	Date Sampled	TPHg mg/kg	TPHd mg/kg	TOG mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	MTBE mg/kg	Semi-VOCs mg/kg	VOCs mg/kg	Pb mg/kg	Cd mg/kg	Cr mg/kg	Zn mg/kg	Sb mg/kg	As mg/kg	Be mg/kg	Cu mg/kg	Hg mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Tl mg/kg
Gasoline UST	and Produ	ct Line Remo	val																						
PL1	1.5	2/8/90	9	NA	NA	0.85	0.017	0.2	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL2	1.5	2/8/90	< 0.5	NA	NA	< 0.005	< 0.005	< 0.005	0.012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL3	3	2/8/90	3.9	NA	NA	0.0095	0.011	0.16	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL4	3	2/8/90	2.8	NA	NA	<0.005	< 0.005	0.16	0.072	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#1	11.5	2/13/90	3,100	NA	NA	1.8	50	51	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#2	11	2/13/90	5,000	NA	NA	2	210	120	780	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#3	11	2/13/90	5.9	NA	NA	0.19	0.060	0.15	0.34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#4	11.5	2/13/90	4,800	NA	NA	8.8	430	130	690	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#5	11	2/13/90	2.4	NA	NA	0.017	0.068	0.045	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#6	12	2/13/90	2,900	NA	NA	2.2	120	51	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#10	15	2/13/90	12	NA	NA	0.12	0.4	0.11	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#11	16	2/13/90	8.6	NA	NA	0.046	0.4	0.13	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#12	16	2/13/90	190	NA	NA	0.26	2.5	2.5	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#13	15.5	2/13/90	5,100	NA	NA	30	360	110	680	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#14	16	2/13/90	2,900	NA	NA	23	150	45	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#16	22	2/14/90	18	NA	NA	3	5	0.5	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#17	22	2/14/90	1,300	NA	NA	20	98	33	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
#18	22	2/14/90	3,100	NA	NA	60	219	69	355	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sidewall-1	13.5	2/13/90	1.1	NA	NA	0.022	0.013	0.023	0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sidewall-2	8.3	2/13/90	< 0.5	NA	NA	< 0.005	< 0.005	< 0.005	0.0068	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sidewall-3	7.5	2/13/90	18	NA	NA	0.27	0.89	0.4	2.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
P1	3	9/16/98	<1.0	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	NA	NA	<1.0	NA	NA										
P2	3	9/16/98	<1.0	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	NA	NA	<1.0	NA	NA										
P3	3	9/16/98	<1.0	NA	NA	<0.005	<0.005	<0.005	<0.005	< 0.05	NA	NA	<1.0	NA	NA										
P4	3	9/16/98	<1.0	NA	NA	< 0.005	<0.005	<0.005	<0.005	< 0.05	NA	NA	<1.0	NA	NA										
P5 P6	3 3	9/16/98 9/16/98	<1.0 <1.0	NA NA	NA NA	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.005 <0.005	<0.05 <0.05	NA NA	NA NA	<1.0 <1.0	NA NA	NA NA										
		9/ 10/ 90	\1.0	INA	INA	<0.005	\0.003	<0.003	<0.005	\0.03	NA	INA	\1.0	INA	INA										
Used-Oil UST																									
#7	8	2/13/90	0.55	NA	12	0.0046	0.019	< 0.005	0.49	NA	ND	ND	15	<3	8	19	<25	140	<1	21	0.02	23	<50	< 5	25
#8	10.5	2/13/90	<0.5	<10	12	<0.005	<0.005	<0.005	0.02	NA	ND	ND	12	<3	5	17	<25	85	<1	16	<0.02	16	<50	< 5	20
Exploratory Bo	rings																								
B-1	5.5	6/8/94	<1.0	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10.5	6/8/94	<1.0	NA	NA	< 0.005	< 0.005	< 0.005	< 0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15.5	6/8/94	2	NA	NA	0.081	0.19	0.02	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20.5	6/8/94	1,600	NA	NA	5.3	72	23	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-2	20.5	6/8/94	2	NA	NA	0.06	0.026	0.031	0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23.5	6/8/94	8	NA	NA	0.13	0.037	0.12	0.83	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-3	18	6/12/96	<1.0	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B-4	12	6/12/96	<1.0	NA	NA	<0.005	< 0.005	< 0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Boring/ Sample ID	Depth (fbg)	Date Sampled	TPHg mg/kg	TPHd mg/kg	TOG mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	MTBE mg/kg	Semi-VOCs mg/kg	VOCs mg/kg	Pb mg/kg	Cd mg/kg	Cr mg/kg	Zn mg/kg	Sb mg/kg	As mg/kg	Be mg/kg	Cu mg/kg	Hg mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Tl mg/kg
Monitoring, Re	emedial, ar	nd Soil Vapor	r Well Bor	ings																					
MW-1	25	3/27/90	1,300	NA	NA	38	150	34	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30	3/27/90	270	NA	NA	1	4	4	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	15	3/26/90	<10	NA	NA	<0.005	<0.005	<0.005	<0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	15	3/26/90	<10	NA	NA	< 0.005	< 0.005	< 0.005	< 0.015	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20	3/26/90	<10	NA	NA	< 0.005	0.01	0.01	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25	3/26/90	51	NA	NA	< 0.005	0.02	0.05	0.28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	15 20	3/28/90 3/28/90	<10 <10	<10 <10	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	37 41	<3 <3	26 25	39 44	NA NA								
	25	3/28/90	<10	<10	39	2.7	23	5.6	46	NA	NA	ND^1	26	<3	13	28	NA								
	23	3/ 28/ 90	\10	\1 0	39	2.7	23	3.0	40	INA	INA	112	20	\ 3	13	20	INA	INA	IVA	INA	INA	INA	INA	INA	INA
MW-5	28.5	6/11/91	<1.0	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	<10	NA											
MW-6	26	6/11/91	5	NA	NA	0.006	0.006	0.06	0.12	NA	NA	NA	<10	NA											
MW-7	26	6/11/91	<1.0	NA	NA	<0.005	< 0.005	<0.005	<0.005	NA	NA	NA	<10	NA											
MW-8	20	12/6/91	<1.0	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	24.5	6/8/94	57	NA	NA	0.07	0.11	0.58	3.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	33.5	6/9/94	<1.0	NA	NA	0.038	< 0.005	< 0.005	0.008	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-1	5	11/24/92	<1.0	NA	NA	< 0.005	0.006	< 0.005	< 0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
**** 1	14	11/24/92	<1.0	NA	NA	< 0.005	< 0.005	<0.005	< 0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	14.5	11/24/92	2	NA	NA	< 0.005	0.058	0.029	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	19.5	11/24/92	250	NA	NA	0.081	5.6	3.4	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	24	11/24/92	990	NA	NA	2.4	60	15	99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	27	11/24/92	230	NA	NA	2	15	5.4	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	31	11/24/92	130	NA	NA	< 0.05	0.73	1	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VW-2	5	11/25/92	<1.0	NA	NA	< 0.005	< 0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
V VV-2	10	11/25/92	<1.0	NA	NA	0.006	< 0.005	< 0.005	< 0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15	11/25/92	<1.0	NA	NA	< 0.005	< 0.005	< 0.005	0.009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20	11/25/92	220	NA	NA	0.65	8.1	26	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25	11/25/92	650	NA	NA	2.7	23	9	49	NA	NA	NA	NA	NA		NA									
	30	11/25/92	1	NA	NA	0.07	0.01	0.012	0.025	NA	NA								NA						
VP-1	5	10/15/09		NA	NA	<0.0005	<0.001	<0.001	<0.001		NA								NA						
VP-2	4.5	10/15/09		NA	NA		<0.001	<0.001	<0.001		NA								NA						
VP-3	5	10/15/09		NA	NA	<0.0009	<0.0009	<0.0009	<0.0009	<0.0005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Abbreviations and Notes:

TPHg and TPHd = Total petroleum hydrocarbons as gasoline and diesel, respectively. TOG = Total oil and grease

MTBE = Methyl tertiary butyl ether.

VOCs = Volatile organic compounds

Semi-VOCs = Semi volatile organic compounds

Note: Shaded samples were collected from soil that was later over-excavated mg/kg = milligrams per kilogram.

NA = Not analyzed

< = Not detected at or above stated laboratory reporting limit

ND = Not detected; reporting limits vary

 $1\ \ VOCs\ not\ detected\ except\ BTEX$

Page 2 of 2

ATTACHMENT A ACEH LETTER DATED MAY 7, 2013

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY

ALEX BRISCOE, Director

May 7, 2013

ENVIRONMENTAL HEALTH DEPARTMENT ENVIRONMENTAL PROTECTION 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 FAX (510) 337-9335

Catalina Espino Devine (Sent via E-mail to: espino@chevron.com)
Chevron Environmental Management Company
6001 Bollinger Canyon Road, Room 5345
San Ramon, CA 94583

T.W. Johnson 7007 San Ramon Road Dublin, CA 94568-3239

Subject: Fuel Leak Case No. RO0000206 and GeoTracker Global ID T0600100354, Chevron #9-5542, 7007 San Ramon Road, Dublin, CA 94568

Dear Ms. Espino Devine and Mr. Johnson:

Thank you for the recently submitted document entitled "Addendum to Case Closure Request" (RFC) dated February 26, 2013, which was prepared by Conestoga-Rovers and Associates (CRA) for the subject site. With this submittal, Chevron requests case closure citing that current site conditions warrant case closure in accordance with the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP).

Alameda County Environmental Health (ACEH) staff has evaluated the request for case closure in conjunction with the site data and information in the RFC and contained in the case files and the following previously submitted reports prepared by CRA:

- Site Conceptual Model and Additional Investigation Work Plan (SCM), dated August 17, 2009
- Soil Vapor Quality Evaluation, Feasibility Study, and Corrective Action Plan, dated October 6, 2010
- Second Semi-Annual 2010 Groundwater Monitoring Report and Request for Suspension of Monitoring, dated October 6, 2010

Based on ACEH staff review, we have determined that the site fails to meet the LTCP General Criteria e and Media-Specific Criteria for Groundwater. ACEH's determination is based on an inadequate conceptual site model of the hydrogeology and contaminant transport mechanisms at the site and lack of supporting data and analysis to justify case closure under the LTCP. Specifically, the RFC states the site satisfies the characteristics of Class 4 of the LTCP Media-Specific Criteria for Groundwater. However, ACEH's review of the case files indicates that the site data and analysis fail to support the requisite characteristics of plume stability, maximum plume length, and dissolved phase concentrations of benzene and methyl tert-butyl ether (MTBE) to qualify under this classification.

Ms. Espino Devine and Mr. Johnson RO0000206 May 7, 2013, Page 2

Therefore, at this juncture ACEH requests that you prepare an updated SCM and Data Investigation Work Plan to address the Technical Comments provided below and support case closure under the media-specific criteria for groundwater in accordance with the schedule below.

This decision to deny closure is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39.2(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeals process.

TECHNICAL COMMENTS

1) Groundwater Monitoring Well Network – Groundwater monitoring has been performed at the site since 1990. To date, 16 groundwater monitoring wells (#1 through #5, and MW-1 through MW-11) have been installed both on and offsite. Currently only five wells remain in the monitoring well network: MW-1, MW-2, MW-3, MW-4, and MW-11. All other wells have either been destroyed or lost. The last three monitoring events conducted at the site in 2009 and 2010 utilized wells MW-1, MW-4 and MW-11 for sample collection.

ACEH is concerned that the most recently used monitoring well network (consisting of wells MW-1, MW-4, and MW-11) is inadequate for purposes of defining the vertical and lateral extent of the plume, plume stability, plume length, and dissolved phase contaminant concentrations in groundwater. Our review of the well construction logs and historical monitoring data indicate the following:

- a. Historic depth to groundwater measurements in onsite monitoring wells have ranged from 19.72 to 28.12 feet below ground surface (bgs); and from 15.42 to 29.80 feet bgs in offsite wells.
- b. Since 1990, a total of 65 soil samples have been collected from excavations and borings to evaluate the horizontal and vertical extent of petroleum hydrocarbons in soil. Based on the analytical results, the majority of residual contamination remaining at the site is present in soil at depths ranging from approximately 20 to 30 feet bgs, coinciding with the historical onsite smear zone. The highest concentrations reside in soil within an interval of 20 to 25 feet bgs.
- c. MW-1 was originally installed in 1990 in the source area and screened from 20 to 35 feet bgs. In 1992, well MW-1 was overdrilled and deepened and completed as a groundwater and extraction well with a new screen interval of 30 to 50 feet bgs. Depth to groundwater in this well has historically ranged from 21.99 to 27.73 feet bgs, indicating submerged screen conditions during 100 percent of the monitoring events since it was installed in 1992. The boring log for this well indicates it is screened across silty clay (CL) and sandy clay (CL) units. This well appears to be inadequately screened and therefore groundwater elevation and analytical data from this well needs to be validated.
- d. MW-4 is screened from 21 to 36 feet bgs and is located at the downgradient property boundary. Depth to groundwater in this well has historically ranged from 20.80 to 27.24 feet bgs, The boring log for this well indicates it is screened across silty sand (SM), sandy clay (CL), and clayey sand (SC) units. This well appears to be adequately screened across the historic smear zone.

- e. MW-11 is screened from 45 to 55 feet bgs and is located off-site in Dublin Boulevard downgradient of the site. This well was installed in 2008 to monitor contaminant concentrations in a deeper groundwater zone identified during a site investigation in 2006, during which elevated levels of total petroleum hydrocarbons as gasoline (TPHg) were detected in a grab groundwater sample collected at a depth of 52 feet bgs in cone penetrometer test boring CPT-2. The boring log for this well indicates it is screened across clay (CH) units, although more permeable units identified as sandy clay (CH) and clayey sand (SC) were identified as depths of 25 and 35 feet bgs, respectively. Depth to groundwater in this well has historically ranged from 20.45 to 23.66 feet bgs, indicating submerged screen conditions of more than 21 feet during 100 percent of the monitoring events conducted since it was installed in 2006.
- f. Monitoring well MW-10, which was located in the vicinity of MW-11, and screened from 15 to 25 feet bgs, was destroyed in 2006. Analytical data from a sample collected from this well in 1999 indicated the plume had migrated off-site as evidenced by elevated levels of TPHg and benzene at concentrations of 5,020 ad 547 micrograms per liter (μg/L), respectively.
- 2) Site Conceptual Model and Data Gap Investigation Work Plan Although the existing SCM presents geologic cross-sections depicting site lithology, residual soil contamination, screen intervals of monitoring wells MW-1, MW-4 and MW-11, and the historic range of groundwater elevations, it fails to address the issues discussed in Item 1, and the possible effects on plume delineation, plume stability, gradient, and sample bias due to submerged well screens and wells screened across different units at the site.

Therefore, please prepare an Updated SCM and Data Gap Investigation Work Plan to address the technical comments listed above. Please utilize a tabular format to highlight the major SCM elements and their associated data gaps, which need to be addressed to progress the site to case closure under the LTCP Media-Specific Criteria for Groundwater (see Attachment A). Please sequence activities in the proposed Data Gap Investigation scope of work to enable efficient data collection in the fewest mobilizations possible.

We encourage you to utilize ACEH's Data Gap Identification Tool (DGIT) in developing a strategy that focuses data collection efforts on the LTCP criteria and an efficient path to site closure. ACEH will provide an electronic DGIT upon request.

3) Landowners Notification Form – Pursuant to Section 25297.15 (a), ACEH, the local agency, shall not consider cleanup or site closure proposals from the primary or active responsible party, issue a closure letter, or make a determination that no further action is required with respect to a site upon which there was an unauthorized release of hazardous substances from an underground storage tank subject to this chapter unless all current record owners of fee title to the site of the proposed action have been notified of the proposed action by the primary or active responsible party. ACEH is required to notify the primary or active responsible party of their requirement to certify in writing to the local agency that the notification requirement in the above-mentioned regulation has been satisfied and to provide the local agency with a complete mailing list of all record fee title owners.

To satisfy this requirement, please complete the enclosed "List of Landowners Form," (Attachment B) and mail it back to ACEH as soon as possible so that we can update our records. Please include the contact information for Tesoro, the current station operator.

Ms. Espino Devine and Mr. Johnson RO0000206 May 7, 2013, Page 4

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Dilan Roe), and to the State Water Resources Control Board's Geotracker website in accordance with Attachment 1 and the following specified file naming convention and schedule:

- June 7, 2013 Landowners Notification Form
 File to be named: LNDOWNR_F_yyyy-mm-dd_RO0004
- July 8, 2013 Updated Site Conceptual Model and Data Gap Investigation Workplan File to be named: SCM WP R yyyy-mm-dd RO0004

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please call me at (510) 567-6767 or send me an electronic mail message at dilan.roe@acgov.org.

Sincerely,

Dilan Roe

Program Manager – ACEH Local Oversight Program

Enclosure: Attachment A – Site Conceptual Model Elements

Attachment B – List of Landowners Form

Attachment 1 - Responsible Party(ies) Legal Requirements/Obligations & ACEH

Electronic Report Upload (ftp) Instructions

cc: James P. Kiernan, Conestoga-Rovers & Associates, 10969 Trade Center Drive, Suite 107, Rancho Cordova, CA 95670 (Sent via E-mail to: jkiernan@craworld.com)

Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore,

CA 94551 (Sent via e-mail to: cdizon@zone7water.com)

Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)

Dilan Roe, ACEH (Sent via E-mail to: dilan.roe@acgov.org)

GeoTracker

File

ATTACHMENT A

Site Conceptual Model Requisite Elements

Site Conceptual Model

The site conceptual model (SCM) is an essential decision-making and communication tool for all interested parties during the site characterization, remediation planning and implementation, and closure process. A SCM is a set of working hypotheses pertaining to all aspects of the contaminant release, including site geology, hydrogeology, release history, residual and dissolved contamination, attenuation mechanisms, pathways to nearby receptors, and likely magnitude of potential impacts to receptors.

The SCM is initially used to characterize the site and identify data gaps. As the investigation proceeds and the data gaps are filled, the working hypotheses are modified, and the overall SCM is refined and strengthened until it is said to be "validated". At this point, the focus of the SCM shifts from site characterization towards remedial technology evaluation and selection, and later remedy optimization, and forms the foundation for developing the most cost-effective corrective action plan to protect existing and potential receptors.

For ease of review, Alameda County Environmental Health (ACEH) requests utilization of tabular formats to (1) highlight the major SCM elements and their associated data gaps which need to be addressed to progress the site to case closure (see Table 1 of attached example), and (2) highlight the identified data gaps and proposed investigation activities (see Table 2 of the attached example). ACEH requests that the tables presenting the SCM elements, data gaps, and proposed investigation activities be updated as appropriate at each stage of the project and submitted with work plans, feasibility studies, corrective action plans, and requests for closures to support proposed work, conclusions, and/or recommendations.

The SCM should incorporate, but is not limited to, the topics listed below. Please support the SCM with the use of large-scaled maps and graphics, tables, and conceptual diagrams to illustrate key points. Please include an extended site map(s) utilizing an aerial photographic base map with sufficient resolution to show the facility, delineation of streets and property boundaries within the adjacent neighborhood, downgradient irrigation wells, and proposed locations of transects, monitoring wells, and soil vapor probes.

- a. Regional and local (on-site and off-site) geology and hydrogeology. Include a discussion of the surface geology (e.g., soil types, soil parameters, outcrops, faulting), subsurface geology (e.g., stratigraphy, continuity, and connectivity), and hydrogeology (e.g., water-bearing zones, hydrologic parameters, impermeable strata). Please include a structural contour map (top of unit) and isopach map for the aquitard that is presumed to separate your release from the deeper aquifer(s), cross sections, soil boring and monitoring well logs and locations, and copies of regional geologic maps.
- b. Analysis of the hydraulic flow system in the vicinity of the site. Include rose diagrams for depicting groundwater gradients. The rose diagram shall be plotted on groundwater elevation contour maps and updated in all future reports submitted for your site. Please address changes due to seasonal precipitation and groundwater pumping, and evaluate the potential interconnection between shallow and deep aquifers. Please include an analysis of vertical hydraulic gradients, and effects of pumping rates on hydraulic head from nearby water supply wells, if appropriate. Include hydraulic head in the different water bearing zones and hydrographs of all monitoring wells.
- c. Release history, including potential source(s) of releases, potential contaminants of concern (COC) associated with each potential release, confirmed source locations, confirmed release locations, and existing delineation of release areas. Address primary leak source(s) (e.g., a tank, sump, pipeline, etc.) and secondary sources (e.g., high-

Site Conceptual Model

concentration contaminants in low-permeability lithologic soil units that sustain groundwater or vapor plumes). Include local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.).

- d. Plume (soil gas and groundwater) development and dynamics including aging of source(s), phase distribution (NAPL, dissolved, vapor, residual), diving plumes, attenuation mechanisms, migration routes, preferential pathways (geologic and anthropogenic), magnitude of chemicals of concern and spatial and temporal changes in concentrations, and contaminant fate and transport. Please include three-dimensional plume maps for groundwater and two-dimensional soil vapor plume plan view maps to provide an accurate depiction of the contaminant distribution of each COC.
- e. Summary tables of chemical concentrations in different media (i.e., soil, groundwater, and soil vapor). Please include applicable environmental screening levels on all tables. Include graphs of contaminant concentrations versus time.
- f. Current and historic facility structures (e.g., buildings, drain systems, sewer systems, underground utilities, etc.) and physical features including topographical features (e.g., hills, gradients, surface vegetation, or pavement) and surface water features (e.g. routes of drainage ditches, links to water bodies). Please include current and historic site maps.
- g. Current and historic site operations/processes (e.g., parts cleaning, chemical storage areas, manufacturing, etc.).
- h. Other contaminant release sites in the vicinity of the site. Hydrogeologic and contaminant data from those sites may prove helpful in testing certain hypotheses for the SCM. Include a summary of work and technical findings from nearby release sites, including the two adjacent closed LUFT sites, (i.e., Montgomery Ward site and the Quest Laboratory site).
- i. Land uses and exposure scenarios on the facility and adjacent properties. Include beneficial resources (e.g., groundwater classification, wetlands, natural resources, etc.), resource use locations (e.g., water supply wells, surface water intakes), subpopulation types and locations (e.g., schools, hospitals, day care centers, etc.), exposure scenarios (e.g. residential, industrial, recreational, farming), and exposure pathways, and potential threat to sensitive receptors. Include an analysis of the contaminant volatilization from the subsurface to indoor/outdoor air exposure route (i.e., vapor pathway). Please include copies of Sanborn maps and aerial photographs, as appropriate.
- j. Identification and listing of specific data gaps that require further investigation during subsequent phases of work. Proposed activities to investigate and fill data gaps identified.

TABLE 1
INITIAL SITE CONCEPTUAL MODEL

	OCM Code		Ī	
CSM Element	CSM Sub- Element	Description	Data Gap	How to Address
Geology and Hydrogeology	Regional	The site is in the northwest portion of the Livermore Valley, which consists of a structural trough within the Diablo Range and contains the Livermore Valley Groundwater Basin (referred to as "the Basin") (DWR, 2006). Several faults traverse the Basin, which act as barriers to groundwater flow, as evidenced by large differences in water levels between the upgradient and downgradient sides of these faults (DWR, 2006). The Basin is divided into 12 groundwater basins, which are defined by faults and non-water-bearing geologic units (DWR, 1974). The hydrogeology of the Basin consists of a thick sequence of fresh-water-bearing continental deposits from alluvial fans, outwash plains, and lacustrine environments to up to approximately 5,000 feet bgs (DWR, 2006). Three defined fresh-water bearing geologic units exist within the Basin: Holocene Valley Fill (up to approximately 400 feet bgs in the central portion of the Basin), the Plio-Pleistocene Livermore Formation (generally between approximately 400 and 4,000 feet bgs in the central portion of the Basin), and the		NA NA
		Pliocene Tassajara Formation (generally between approximately 250 and 5,000 or more feet bgs) (DWR, 1974). The Valley Fill units in the western portion of the Basin are capped by up to 40 feet of clay (DWR, 2006).		
	Site	Geology: Borings advanced at the site indicate that subsurface materials consist primarily of finer-grained deposits (clay, sandy clay, silt and sandy silt) with interbedded sand lenses to 20 feet below ground surface (bgs), the approximate depth to which these borings were advanced. The documented lithology for one onsite boring that was logged to approximately 45 feet bgs indicates that beyond approximately 20 feet bgs, fine-grained soils are present to approximately 45 feet bgs. A cone penetrometer technology test indicated the presence of sandier lenses from approximately 45 to 58 feet bgs and even coarser materials (interbedded with finer-grained materials) from approximately 58 feet to 75 feet bgs, the total depth drilled. The lithology documented at the site is similar to that reported at other nearby sites, specifically the Montgomery Ward site (7575 Dublin Boulevard), the Quest laboratory site (6511 Golden Gate Drive), the Shell-branded Service Station site (11989 Dublin Boulevard), and the Chevron site (7007 San Ramon Road).	As noted, most borings at the site have been advanced to approximately 20 feet bgs, and one boring has been advanced and logged to 45 feet bgs; CPT data was collected to 75 feet bgs at one location. Lithologic data will be obtained from additional borings that will be advanced on site to further the understanding of the subsurface, especially with respect to deeper lithology.	Two direct push borings and four multi-port wells will be advanced to depth (up to approximately 75 feet bgs) and soil lithology will be logged. See items 4 and 5 on Table 2.
		Hydrogeology: Shallow groundwater has been encountered at depths of approximately 9 to 15 feet bgs. The hydraulic gradient and groundwater flow direction have not been specifically evaluated at the site.	The on-site shallow groundwater horizontal gradient has not been confirmed. Additionally, it is not known if there may be a vertical component to the hydraulic gradient.	Shallow and deeper groundwater monitoring wells will be installed to provide information on lateral and vertical gradients. See Items 2 and 5 on Table 2.
Surface Water Bodies		The closest surface water bodies are culverted creeks. Martin Canyon Creek flows from a gully west of the site, enters a culvert north of the site, and then bends to the south, passing approximately 1,000 feet east of the site before flowing into the Alamo Canal. Dublin Creek flows from a gully west of the site, enters a culvert approximately 750 feet south of the site, and then joins Martin Canyon Creek approximately 750 feet southeast of the site.		NA
Nearby Wells		The State Water Resources Control Board's GeoTracker GAMA website includes information regarding the approximate locations of water supply wells in California. In the vicinity of the site, the closest water supply wells presented on this website are depicted approximately 2 miles southeast of the site; the locations shown are approximate (within 1 mile of actual location for California Department of Public Health supply wells and 0.5 mile for other supply wells). No water-producing wells were identified within 1/4 mile of the site in the well survey conducted for the Quest Laboratory site (6511 Golden Gate Drive; documented in 2009); information documented in a 2005 report for the Chevron site at 7007 San Ramon Road indicates that a water-producing well may exist within 1/2 mile of the site.	A formal well survey is needed to identify water-producing, monitoring, cathodic protection, and dewatering wells.	Obtain data regarding nearby, permitted wells from the California Department of Water Resources and Zone 7 Water Agency (Item 11 on Table 2).

TABLE 2

DATA GAPS AND PROPOSED INVESTIGATION

Item	Data Gap	Proposed Investigation	Rationale	Analysis
5	impacts to deeper groundwater.	monitoring wells (aka multi-port wells) to approximately 65 feet bgs in the northern parking lot with ports at three depths (monitoring well locations may be adjusted pending results of shallow grab groundwater samples; we will discuss any potential changes with ACEH before proceeding). Groundwater monitoring frequency to be determined. Soil samples will be collected only if there are field	One well is proposed at the western (upgradient) property boundary to confirm that there are no deeper groundwater impacts from upgradient. Two wells are proposed near the center of the northern parking lot to evaluate potential impacts in an area where deeper impacts, if any, would most likely to be found. One well is proposed at the eastern (downgradient) property boundary to confirm that there are no impacts extending off-site. Port depths will be chosen based on the locations of saturated soils (as logged in direct push borings; see Item 4, above), but are expected at approximately 15, 45, and 60 feet bgs.	Groundwater: VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.
6	the downgradient direction (east).	8 feet bgs along the eastern property boundary. Based on the results of the sampling, two sets of nested probes will be converted to vapor monitoring wells to allow for evaluation of VOC concentration trends over time.	Available data indicate that PCE and TCE are present in soil vapor in the eastern portion of the northern parking lot. Samples are proposed on approximately 50-foot intervals along the eastern property boundary to provide a transect of concentrations through the vapor plume. The depths of 4 and 8 feet bgs are chosen to provide data closest to the source (i.e., groundwater) while avoiding saturated soil, and also provide shallower data to help evaluate potential attenuation within the soil column. Two sets of nested vapor probes will be converted into vapor monitoring wells (by installing well boxes at ground surface); the locations of the permanent wells will be chosen based on the results of samples from the temporary probes.	Soil vapor: VOCs by EPA Method TO-15.
7	Evaluate potential for off-site migration of impacted groundwater in the downgradient direction (east).			Groundwater: VOCs by EPA Method 8260, dissolved oxygen, oxidation/reduction potential, temperature, pH, and specific conductance.
8	north of the highest concentration area.	A for collection of soil and grab groundwater samples. Soil samples will be collected at two depths in the vadose zone. Soil samples will be collected based on field indications of impacts (PID readings, odor, staining) or, in the absence of field indications of impacts, at 5 and 10 feet bgs.	The highest concentrations of PCE in groundwater were detected at boring NM-B-32, just north of Building A. The nearest available data to the north are approximately 75 feet away. One of the borings will be advanced approximately 20 feet north of NM-B-32 to provide data close to the highest concentration area. A second boring will be advanced approximately halfway between the first boring and former boring NM-B-33 to provide additional spatial data for contouring purposes. These borings will be part of a transect in the highest concentration area.	
9	Evaluate VOC concentrations in soil vapor in the south parcel of the site.	around boring SV-25, where PCE was detected in soil vapor at a low concentration.	PCE was detected in soil vapor sample SV-25 in the southern parcel, although was not detected in groundwater in that area. Three probes will be installed approximately 30 feet from of boring SV-25 to attempt to delineate the extent of impacts. A fourth probe is proposed west of the original sample, close to the property boundary and the location of mapped utility lines, which may be a potential conduit, to evaluate potential impacts from the west.	Soil vapor: VOCs by EPA Method TO-15.
10	Obtain additional information regarding subsurface structures and utilities to further evaluate migration pathways and sources.	methodologies will be used, as appropriate, to further evaluate the presence of unknown utilities and structures at the site.	Utilities have been identified at the site that include an on-site sewer lateral and drain line, and shallow water, electric, and gas lines. Given the current understanding of the distribution of PCE in groundwater at the site, it is possible that other subsurface utilities, and specifically sewer laterals, exist that may act as a source or migration pathway for distribution of VOCs in the subsurface.	NA

ATTACHMENT B

Landowner Notification Form

LIST OF LANDOWNERS FORM

County of Alameda Environmental Health Services Environmental Protection 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

CERTIFIED LIST OF RECORD FEE TITLE OWNERS FOR:

Site	Name:
Ad	ress:
Cit	, State, Zip:
Re	ord ID #: RO
Ple	ase fill out item 1 if there are multiple site landowners (attach an extra sheet if necessary). If you are the sole site lowner, skip item 1 and fill out item 2.
1.	In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, I (name of primary responsible party), certify that the following is a complete list of current record fee title owners and their mailing addresses for the above site:
	g and the second
	Name:
	Address:
	City, State, Zip:
	E-mail Address:
	Name:
	Address:
	City, State, Zip:
	E-mail Address:
	Name:
	Address:
	City, State, Zip:
	E-mail Address:
2.	In accordance with Section 25297.15(a) of Chapter 6.7 of the California Health & Safety Code, , certify that I am the sole landowner for the above site.
	Sincerely,
	Signature of Primary Responsible Party Printed Name Date E-mail Address

ATTACHMENT 1

Responsible Party(ies) Legal Requirements/Obligations
& ACEH Electronic Report Upload (ftp) Instructions

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. Please visit the SWRCB website for more information on these requirements. (https://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/)

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 7835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, late reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)

REVISION DATE: July 25, 2012

ISSUE DATE: July 5, 2005

PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010

SECTION: Miscellaneous Administrative Topics & Procedures

SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (petroleum UST and SCP) require submission of all reports in electronic form to the county's FTP site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Please do not submit reports as attachments to electronic mail.
- Entire report including cover letter must be submitted to the ftp site as a single Portable Document Format (PDF) with no password protection.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements must be included and have either original or electronic signature.
- <u>Do not</u> password protect the document. Once indexed and inserted into the correct electronic case file, the
 document will be secured in compliance with the County's current security standards and a password.
 <u>Documents with password protection will not be accepted.</u>
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

- 1) Obtain User Name and Password
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to .loptoxic@acgov.org
 - b) In the subject line of your request, be sure to include "ftp PASSWORD REQUEST" and in the body of your request, include the Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for.
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to ://alcoftp1.acgov.org
 - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
 - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to .loptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

ATTACHMENT B GROUNDWATER MONITORING DATA

Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542 7007 San Ramon Road

Dublin, California

WELL ID		TOC*	GWE	DTW	TPH-GRO		Dublin, Cal			propropra			****	
DATE		(fi.)	(msl)	(fl.)	(rη-GRO (μg/L)	Β (μg/L)	T.	E.	X	MTBE	TOG	1,2-DCA	EDB	HVOCs
		····//	(nay		(PS/T/)	··· (µg/ss/;··:	(µg/L)	(µg/L)	(ng/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(μg/L)
MW-1														
4/3-4/90	 .	363.98	****	**	46,000	8,400	7,400	860	5,600				1.04	
•	D)	363.98			43,000	8,400	7,200	. 840	5,200				1.1	***
05/31/91		363.98	338.31	25.67	31,000	7,400	2,500	630	2,100			2.0		ND^3
05/31/91		363.98									<5000			
06/21/91		363.98	337.75	26.23			**	~~	**				_	
07/17/91		363.98	337.45	26.53										
09/20/91		363.98			31,000	3,000	2,800	610	3,100			0.6		ND^3
10/04/91		363.98	336.08	27.90						**		-		
12/19/91		363.98	335.86	28.12	20,000	5,200	1,700	560	2,000	_		3.3		ND^3
03/19/92		363.98	339.35	24.63	30,000	8,500	3,600	590	2,400			2.7		ND^3
06/19/92		364.32	338.09	26.23	25,000	1,100	2,000	520	1,800					
09/22/92		364.32	336.59	27.73	21,000	8,000	3,500	670	2,900					_
12/18/92		364.32	337.56	26.76	79,000	12,000	12,000	1,600	8,500	***	-	_		
03/10/931		364.32			45,000	16,000	14,000	1,100	5,500		_			
03/22/93 ²		364.32						***	***					
06/14/93 ²		364.32					-							***
07/25/93 ²		364.32					-							***
09/23/93 ²		364.32	-			-						**		
03/21/94		364.32	338.16	26.16	5,900	1,600	560	140 [°]	330					
07/06/94		364.32	337.12	27.20	***				***					
08/26/94		364.32			20,000	5,300	4,900	610	2,900					***
09/22/94		364.32	336.88	27.44	42,000	10,000	8,300	1,000	4,900					
12/08/94		364.32	337.62	26.70	38,000	9,000	7,700	830	3,800					
03/06/95		364.32	340.64	23.68	47,000	9,400	7,100	750	3,400			_		
06/08/95		364.32	341.64	22.68	170,000	29,000	29,000	2,600	13,000					**
09/13/95		364.32	339.22	25.10	39,000	11,000	10,000	1,100	4,900		***		***	
12/16/95		364.32	338.24	26.08	40,000	7,000	6,300	570	2,500	<2.5				•
03/28/96		364.32	342.12	22.20	16,000	3,700	3,200	330	1,500	<120	***			
06/27/96		364.32	340.12	24.20	40,000	6,900	8,700	830	4,000	<120				
09/30/96		364.32	338.70	25.62	190,000	24,000	31,000	2,900	14,000	380		-		
12/30/96		364,32	340.11	24.21	130,000	25,000	32,000	2,900	15,000	<500				
03/11/97		364.32	340.60	23.72	76,000	11,000	13,000	1,000	6,500	<500			_	
06/10/97		364.32	339.00	25.32	63,000	9,900	15,000	1,400	7,000	<500				
10/01/97		364.32	338.31	26.01	48,000	8,400	12,000	1,200	5,700	<500				_
12/17/97						~,.~		.,	21100	~~~~				
12/1//9/		364.32					-			_	-			

Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542 7007 San Ramon Road

Dublin, California

	.,					Dublin, Cali	fornia						
WELL ID/	TOC*	GWE	DTW	TPH-GRO	В	T	R.	X	MTBE	TOG	1,2-DCA	EDB	HVQCs
DATE	(ft.)	(msl)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/ L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1 (cont)													4-1.4-631-461-4-6-4-4-4
09/12/98 ⁵	364.32	340.10	24.22	61,000	10,000	13,000	1,700	7,600	<125/143 ⁶		•••	***	
09/29/99 ⁴	364.32	339.04	25.28	423	65	48.8	12.4	43.7	8.0		<2.0	<2.0	_
03/17/00	364.32	341.34	22.98	61,200	10,200	15,300	1890	8540	<2000			**	_
08/28/00	364.32	338.30	26.02	2,00015	590	470	110	390	25				=
02/25/01	364.32	338.84	25.48	440 ¹⁵	120	33	8.5	260	<13		•••		
09/17/01	364.32	337.65	26.67	16,000	1,500	1,900	340	1,400	<20	_			==
03/25/02	364.32	340.81	23.51	96,000	11,000	21,000	2,500	12,000	<100	_			
09/16/02 ⁵	364.32	337.91	26.41	3,700	1,200	52	140	92	6.9/<2 ⁶		<2	<2	
03/18/03	364.32	339.86	24.46	740	120	43	25	70	<2.5/<0.5 ⁶				
09/18/03 ¹⁶	364.32	338.36	25.96	66,000	6,600	12,000	1,500	6,900	<2				
03/24/04 ¹⁶	364.32	340.44	23.88	130	8	2	2	4	<0.5				derain.
09/16/04 ¹⁶	364.32	337.68	26.64	14,000	1,600	2,200	500	2,000	<1				
03/23/05 ¹⁶	364.32	342.04	22.28	<50	< 0.5	<0.5	< 0.5	<0.5	<0.5		•••		
09/02/05 ¹⁶	364.32	338.60	25.72	3,100	630	60	110	160	< 0.5				
03/24/06 ¹⁶	364.32	340.49	23.83	680	130	0.7	15	16	< 0.5			**	
08/24/06 ¹⁶	364.32	338.36	25.96	1,000	180	8	20	41	<0.5	145			**
03/01/07 ¹⁶	364.32	340.47	23.85	28,000	1,800	3,800	710	3,100	<5				
09/06/07 ¹⁶	364.32	338.07	26.25	11,000	1,900	46	410	960	<1			•	
03/10/08 ¹⁶	364.32	341.36	22.96	19,000	940	3,800	590	3,000	<5		_		
09/02/08 ¹⁶	364.32	338.07	26.25	23,000	1,200	4,300	840	4,100	<3				
03/18/09 ¹⁶	364.32	340.92	23.40	35,000	1,200	6,400	1,400	5,800	<3				
09/01/09 ¹⁶	364.32	337.64	26.68	8,700	410	1,100	390	1,400	<0.5				
03/03/10 ¹⁶	364.32	342.33	21.99	50,000	1,100	7,500	1,700	7,800	<5				
09/08/10 ¹⁶	364.32	339.51	24.81	21,000	480	2,500	810	3,100	<10	-	←		

Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542 7007 San Ramon Valley Boulevard Dublin, California

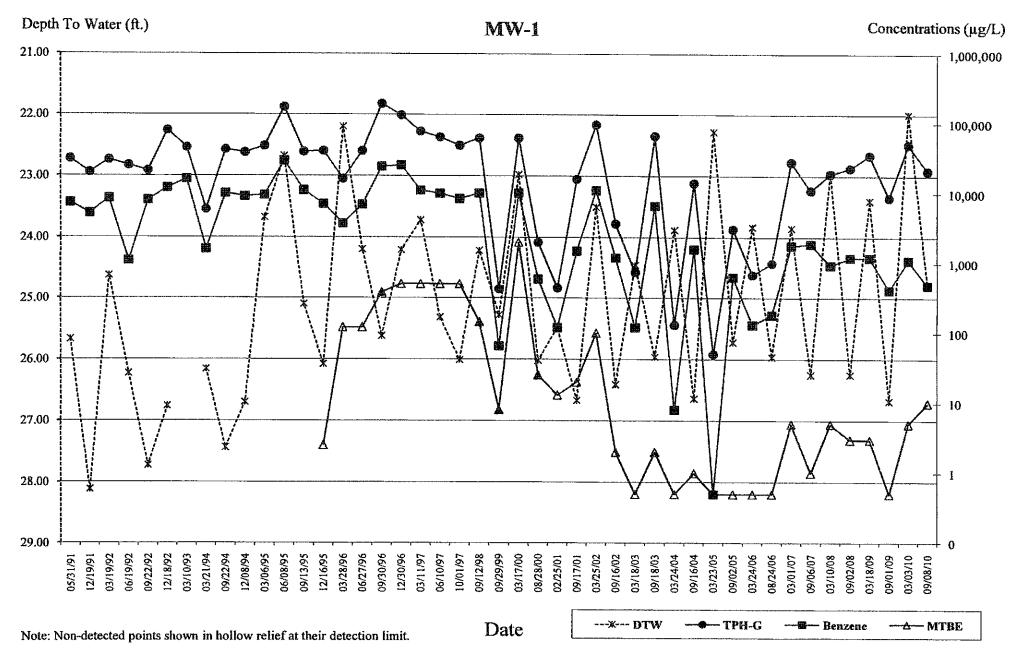


Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542 7007 San Ramon Road

Dublin California

WELL ID	TOC*	GWE	oriente en particular	Control of the Control		Dublin, Cal					· · · · · · · · · · · · · · · · · · ·		
DATE	(fi.)	(msl)	DTW	TPH-GRO	B	Ţ	L	X	MTBE	TOG	1,2-DCA	EDB	HVOCs
	<u> </u>	(msy	(fL)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)
MW-2													
4/3-4/90	364.19	44.40		<50	< 0.3	< 0.3	< 0.3	<0.6	***			<0.02	
05/31/91	364.19	338.68	25.51	100	3.1	4.2	0.7	2.0			<0.5		ND ³
05/31/91	364.19		-		_					<5000			
06/21/91	364.19	338.06	26.13							**			
07/17/91	364.19	337.73	26.46									•••	
09/20/91	364.19	-		68	1.3	1.6	0.8	3.0		**			
10/04/91	364.19	336.40	27.79								***		
12/19/91	364.19	336.13	28.06	<50	0.6	1.2	0.8	2.5				**	**
03/19/92	364.19	339.73	24.46	<50	2.5	2.0	1.1	2.4			_		
06/19/92	364.64	338.54	26.10	<50	< 0.5	0.6	0.7	1.2				-	
09/22/92	364.64	337.04	27.60	200	16	42	6.1	32					
12/18/92	364.64	338.32	26.32	<50	<0.5	< 0.5	<0.5	<0.5					**
03/22/93	364.64	343.29	21.39	<50	< 0.5	< 0.5	< 0.5	<0.5			****		
06/14/93	364.64	339.49	25.15		_	_							
07/25/93	364.64	340.12	24.52	<50	<0.5	< 0.5	< 0.5	<0.5					
09/23/93	364.64	339.01	25.63	72	12	4.0	6.0	8.0					
12/22/93	364.64	338.30	26.34	1,600	25	< 0.5	3.8	4.8					
03/21/94	364.64	338.81	25.83	<50	0.7	3.3	< 0.5	1.9					
06/29/94	364.64			52	0.8	0.9	0.8	1.9					
07/06/94	364.64	337.94	26.70			**						_	
09/22/94	364.64	337.82	26.82	<50	0.7	< 0.5	<0.5	0.6					**
12/08/94	364.64	338.36	26.28	<50	<0.5	< 0.5	< 0.5	<0.5			***		
03/06/95	364.64	341.37	23.27	<50	< 0.5	<0.5	< 0.5	<0.5	****				
06/08/95	364.64	342.26	22.38	<50	<0.5	< 0.5	< 0.5	<0.5	_				
09/13/95	364.64	339.95	24.95	<50	<0.5	0.8	< 0.5	0.8				***	
12/16/95	364.64	338.86	25.78	<50	<0.5	< 0.5	< 0.5	<0.5	<2.5				
03/28/96	364.64	343.30	21.34	<50	0.8	5.6	1.0	6.2	<5.0			·	4-4
06/27/96	364.64	340.65	23.99	<50	< 0.5	< 0.5	< 0.5	<0.5	<5.0				
09/30/96	364.64	339.50	25.14	<50	< 0.5	< 0.5	< 0.5	<0.5	<5.0	**		***	
12/30/96	364.64	341.03	23.61	<50	<0.5	< 0.5	< 0.5	< 0.5	<5.0				
03/11/97	364.64	341.47	23.17	<50	< 0.5	< 0.5	< 0.5	<0.5	<5.0		**		4
06/10/97	364.64	339.92	24.72	<50	<0.5	<0.5	< 0.5	<0.5	<5.0	_			
10/01/97	364.64	338.79	25.85	<50	1.0	1.2	< 0.5	1.7	<5.0				****
12/17/97	364.64	339.66	24.98	<50	<0.5	<0.5	<0.5	<0.5	<2.5	**		6-4	-
03/29/98	364.64	344.30	20.34	110	20	12	4.3	14	5.4	_		wm	
09/12/98	364.64	341.05	23.59	<50	< 0.5	<0.5	<0.5	<0.5	<2.5		***	_	

Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542

7007 San Ramon Road

Research control of						Dublin, Cali	fornia						
WELL ID/	TOC*	GWE	DTW	TPH-GRO	B	r	E	*****	MTBE	TOG	1,2-DCA	EDB	HVOCs
DATE	(ft.)	(msl)	(fL)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)
MW-2 (cont)													
03/26/99	364.64	341.30	23.34	<50	< 0.5	< 0.5	<0.5	< 0.5	<2.0	**			
09/29/99	364.64	339.63	25.01	<50	<0.5	< 0.5	<0.5	<0.5	<5.0	**	_		
NOT MONITO	DRED/SAMPI	,ED							-14				
09/01/09	364.64	338.52	26.12					~~		•••			
03/03/10	364.64	343.80	20.84	***		•••				**			
09/08/10	364.64	340.46	24.18		***	-		-	**			-	-
MW-3													
4/3-4/90	361.92	***		2,200	36	5.0	6.0	17				<0.02	
05/31/91	361.92	338.72	23.20	2,200	130	11	31	78			19		ND^3
05/31/91	361.92				•••					<5000			***
06/21/91	361.92	337.79	24.13	**		~~							
07/17/91	361.92	337.73	24.59					-		***			
09/20/91	361.92	335.94	25.98	2,200	190	6.0	24	32					
12/19/91	361.92	335.68	26.24	640	73	27	17	56					
03/19/92	361.92	339.46	22.46	4,500	1,000	15	91	240			••		+
06/19/92	362.26	337.94	24.32	1,100	89	3.3	9.1	13					
09/22/92	362.26	336.42	25.84	1,400	81	51	15	49			**		
12/18/92	362.26	337.86	24.40	1,100	2.0	1.1	53	38	_	***	-		
03/22/93	362.26	342.54	19.72	1,600	96	9.0	14	91		_			
06/14/93	362.26	338.74	23.52										
07/25/93	362.26	339.05	23.21	1,200	19	6.0	2.0	5.0)A-40
09/23/93	362.26	338.24	24.02	1,500	35	<0.5	5.0	13					•••
12/22/93	362.26	337.59	24.67	1,500	26	<0.5	3.9	4.9					~~
03/21/94	362.26	338.21	24.05	1,400	22	14	1.1	5.3					
06/29/94	362.26			1,700	90	6.1	20	81		_			-+
07/06/94	362.26	337.18	25.08		_								~~
09/22/94	362.26	337.48	24.78	2,600	72	7.6	110	370					
12/08/94	362.26	337.91	24.35	2,700	32	<0.5	100	140					
03/06/95	362.26	340.79	21.47	1,000	4.0	9.9	8.8	7.7	••			**	
06/08/95	362.26	341.27	20.99	1,500	13	3.2	12	17	**			**	
09/13/95	362.26	338.75	23.51	2,100	12	79	76	420					
12/16/95	362.26	338.26	24.00	650	<0.5	<0.5	4.4	6.5	12				
03/28/96	362.26	342.36	19.90	1,500	4.3	6.5	60	100	15	***			

Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542

**************************************						Dublin, Cal							
WELL ID/	TOC*	GWE	DTW	TPH-GRO	B	T	K	X	MTBE	TOG	1,2-DCA	EDB	HVOCs
DATE	(jt.)	(msl)	(ft)	(μg/L)	(μg/L)	(μg/L)	· (μg/L). · ·	(µg/L)	(µg/L).	(μg/L)	(µg/L)	(µg/L)	(µg/L)
MW-3 (cont)													
06/27/96	362.26	340.28	21.98	1,200	< 0.5	<0.5	1.9	2.0	13				
09/30/96	362.26	338.44	23.82	620	< 0.5	<0.5	< 0.5	0.8	10				
12/30/96	362.26	339.96	22.30	1,200	0.6	<0.5	0.6	0.7	12				
03/11/97	362.26	340.75	21.51	1,400	< 0.5	3.1	< 0.5	0.7	32			**	
06/10/97	362.26	338.66	23.60	1,400	1.8	4.8	0.8	1.1	18				
10/01/97	362.26	337.53	24.73	1,100	0.6	2.2	1.0	1.3	7.8			***	
12/17/97	362.26	338.99	23.27	450 ⁷	7.9	1.2	<1.0	1.5	11	M-q-			***
03/29/98	362.26	342.01	20.25	890	0.84	1.4	1.3	0.68	100		**		
09/12/98	362.26	340.38	21.88	740 ⁷	< 0.5	<0.5	< 0.5	<0.5	5.4				
03/26/99	362.26	339.83	22.43	661	< 0.5	34.9	0.848	1.36	5.68				
09/29/99	362.26	338,63	23.63	348	0.975	0.58	<0.5	0.618	<5.0				
NOT MONITO	DRED/SAMPI	LED											
09/01/09	362.26	337.74	24.52										
03/03/10	362.26	342.50	19.76	**									
09/08/10	362.26	339.48	22.78	-			_		_				***
MW-4	262.70			42.000	4.000	£ 000	700	e eno					
4/3-4/90	362.70			43,000	4,000	5,000	790	5,500		18,000		< 0.02	
4/3-4/90	362.70				6,000	8,200	1,500				-		
05/31/91	362.70	338.03	24.67	34,000	2,900	2,900	680	3,300			< 0.5	**	ND^3
05/31/91	362.70	19-21		<5000									**
06/21/91	362.70	337.39	25.31					***					
07/17/91	362.70	336,97	25.73		***		-			***			
09/20/91	362.70		-	37,000	4,000	3,200	580	3,000		_	9.2		ND^3
10/04/91	362.70	335.62	27.08										
12/19/91	362.70	335.46	27.24	41,000	5,500	4,900	1,000	4,400		-	17		ND^3
03/19/92	362.70	339.04	23.66	21,000	3,800	2,900	500	3,200			15		ND^8
06/19/92	363.07	337.74	25.33	27,000	1,800	1,600	570	1,900		<5000			
09/22/92	363.07	336.17	26.90	20,000	4,100	2,700	670	3,200		<5000			
12/18/92	363.07	337.45	25.62	15,000	2,200	2,000	370	1,600	44	<5000	**		
03/22/93	363.07	342.27	20.80	41,000	3,900	5,100	840	4,500		5000			
06/14/93	363.07	337.34	25.73										
07/25/93	363.07	339.05	24.02	94,000	18,000	30,000	2,400	14,000		<5000	~-		
09/23/93	363.07	338.07	25.00	23,000	4,700	2,000	900	4,600	~-	<5000	**		
12/22/93	363.07	337.35	25.72	18,000	2,800	1,300	420	1,700		<5000			

Table 1
Groundwater Monitoring Data and Analytical Results

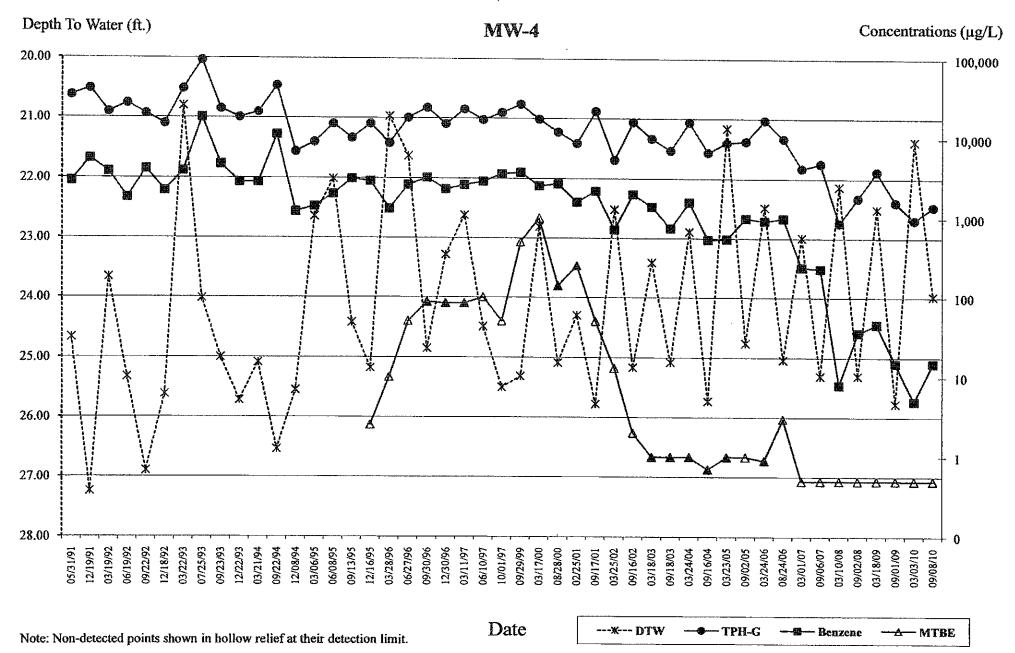
WELL ID	TOC*	GWE	DTW	TPH-GRO	В	Dublin, Cali T	E	X		Company and the Company	organisas er	ing <u>aa</u> an	102248E1E11
DATE	(1.)	(msl)	(ft.)	(μg/L)	υ (μg/L)	(μg/L)	arana aran aran aran da babababababababababababababababababa		MTBE	тос	1,2-DCA	EDB	HVOCs
	····	(49434)	······ V:-/	PB	PERLY	(µg/L)	(µg/L)	(pg/L)	(µg/L)	(µg/L)	:: (μg/L)	(µg/L)	(μg/L)
MW-4 (cont)													
03/21/94	363.07	337.98	25.09	21,000	2,800	1,700	540	1,900		<5000			••
06/29/94	363.07			25,000	4,000	2,600	960	3,300	**	<5000			
07/06/94	363.07	336.96	26.11	~~			***						-
09/22/94	363.07	336.53	26.54	45,000	11,000	8,800	1,000	5,100	w	<5000		**	
12/08/94 ⁹	363.07	337.52	25.55	6700	1,200	720	34	1,100		<5000			
03/06/95	363.07	340.43	22.64	8900	1,400	540	350	940		***			
06/08/95	363.07	341.06	22.01	15,000	2,000	1,500	400	1,500					_
09/13/95	363.07	338.65	24.42	10,000 ¹⁰	3,100	670	500	1,400		***			
12/16/95	363.07	337.89	25.18	15,000	2,900	960	420	1,200	<2.5				
03/28/96	363.07	342.10	20.97	8600	1,300	920	330	1,100	<10				
06/27/96	363.07	341.44	21.63	18,000	2,600	1,500	740	2,400	<50				
09/30/96	363.07	338.22	24.85	24,000	3,200	1,200	710	2,200	87				-
12/30/96	363.07	339.79	23.28	15,000	2,300	1,000	600	1,900	84				
03/11/97	363.07	340.45	22.62	23,000	2,600	920	780	2,200	84				
06/10/97	363.07	338.58	24.49	17,000	2,900	790	750	1,700	<100				
10/01/97	363.07	337.57	25.50	21,000	3,600	1,400	1,300	2,700	<50		_		
12/17/97	363.07			**				-			-		
03/29/98	363.07	DISCONTINU	JED		-								
09/29/9911	363.07	337.75	25.32	26,700	3,770	844	1,290	2,970	<500		<40	<40	
03/17/00	363.07	340.26	22.81	17,400	2,560	942	688	1,980	<1000				
08/28/00	363.07	337.98	25.09	12,000 ¹⁵	2,700	220	530	750	140				
02/25/01	363.07	338.77	24.30	8,700 ¹⁵	1,600	400	600	1,500	250				
09/17/01	363.07	337.29	25.78	22,000	2,200	620	860	2,400	<50	***			
03/25/02	363.07	340.55	22.52	5,400	720	53	230	390	<13				64/10
09/16/02 ⁵	363.07	337.90	25.17	16,000	2,000	180	630	1,800	39/<2 ⁶		<2	<2	
03/18/03	363.07	339.66	23.41	10,000	1,400	110	490	1,100	<13/1 ⁶				
09/18/03 ¹⁶	363.07	337.99	25.08	7,100	750	61	240	560	1				_
03/24/04 ¹⁶	363.07	340.18	22.89	16,000	1,600	170	720	2,000	1				
09/16/04 ¹⁶	363.07	337.34	25.73	6,700	540	160	250	1,000	0.7				
03/23/0516	363.07	341.91	21.16	8,900	550	75	470	1,500	1				
09/02/0516	363.07	338.31	24.76	9,300	1,000	41	440	840	<1				
03/24/06 ¹⁶	363.07	340.59	22.48	17,000	930	120	800	2,700	0.9				_
08/24/06 ¹⁶	363.07	338.03	25.04	10,000	1,000	29	350	590	<3				
03/01/07 ¹⁶	362.88	339.89	22.99	4,300	240	25	130	460	<0.5			_	***
09/06/0716	362.88	337.57	25.31	4,900	230	11	170	420	<0.5				
03/10/0816	362.88	340.75	22.13	870	8	0.7	8	32	<0.5		<u>-</u> -		
							-		J.5			_	

Chevron Service Station #9-5542

			···			Dublin, Cal	<u>ifornia</u>						
WELL ID	TOC*	GWE	DTW	TPH-GRO	B	T	ĸ	X	MTBE	TOC	1.2-DCA	FOR	HV0C.
DATE	(fi)	(mst)	(fL)	(µg/L)	(µg/L)	(µg/L)	(ue/L)	(ne/L)	(µg/L)				(μg/L)
MW-4 (cont)					<u></u>		<u> </u>					19.57	
, ,													
09/02/08 ¹⁶	362.88	337.57	25.31	1,800	36	2	72	160	< 0.5				
03/18/09 ¹⁶	362.88	340.37	22,51	3,900	46	4	190	450	<0.5		~~		
09/01/09 ¹⁶	362.88	337.11	25.77	1,600	15	0.9	84	88	<0.5				
03/03/10 ¹⁶	362.88	341.50	21.38	950	5	<0.5	15	9	<0.5	***			
09/08/10 ¹⁶	362.88	338.90	23.98	1,400	15	0.7	62	16	<0.5				

Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542 7007 San Ramon Valley Boulevard Dublin, California



Chevron Service Station #9-5542

7007 San Ramon Road Dublin, California WELL ID TOC* GWE DTW TPH-GRO B T È X MTBE TOG **EDB** 1,2-DCA HVOCs DATE (fi.) (inst) (fl.) $(\mu g/L)$ $(\mu g/L)$ $(\mu g/L)$ (µg/L). $(\rho g/L)$ (ug/L) $(\mu g/L)$ $(\mu \varrho/L)$ $(\mu g/L)$ (µg/L) MW-11 12/29/0617 357.39 335,25 22.14 190 <0.5 0.6 6 0.6 < 0.5 03/01/0716 357.39 334.89 22.50 <50 8.0 2 0.7 3 < 0.5 09/06/0716 357.39 333.99 23.40 <50 <0.5 < 0.5 < 0.5 < 0.5 < 0.5 03/10/0816 357.39 335.83 21.56 <50 < 0.5 < 0.5 < 0.5 8.0 < 0.5 09/02/0816 357.39 333.73 23.66 <50 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 03/18/0916 357.39 336.46 20.93 <50 < 0.5 0.5 < 0.5 < 0.5 < 0.5 09/01/0916 357.39 333.84 23.55 <50 < 0.5 0.5 < 0.5 0.7 < 0.5 03/03/1016 357.39 336.94 20.45 <50 < 0.5 0.9 0.6 3 < 0.5 09/08/1016 357.39 335.14 22.25 <50 <0.5 1 0.6 2 < 0.5 MW-9 07/06/9413 361.23 336.08 25.15 08/26/94 361.23 ----12,000 1,700 240 410 1,400

09/22/94	361.23	335.49	25.74	10,000	1,900	290	320	1,200				 	
12/08/94	361.23	336.39	24.84	18,000	2,400	780	450	4,600				 	
03/06/95	361.23	339.40	21.83	6,100	1,400	260	420	1,500				 	
06/08/95	361.23	339.94	21.29	14,000	2,100	220	540	1,700		***		 	
09/13/95	361.23	337.85	23.65	11,000	1,900	120	490	1,400				 **	
12/16/95	361.23	336.91	24.32	16,000	1,900	<0.5	680	1,200	<2.5	~~		 	
03/28/96	361.23	340.78	20.45	960	120	5.9	33	70	18		~~	 	
06/27/96	361.23	338.39	22.84	10,000	1,200	46	340	1,000	66			 	
09/30/96	361.59	337.47	24.12	15,000	1,300	36	390	950	100			 	
12/30/96	361.59	338.95	22.64	12,000	1,200	54	470	1,300	100	***		 	
03/11/97	361.59	339.50	22.09	13,000	850	37	310	930	63			 	
06/10/97	361.59	337.81	23.78	9,000	800	7.7	220	360	86			 	
10/01/97	361.59	338.06	23.53	7,000	770	13	270	540	99		**	 	
12/17/97	361.59			-		***			••			 	

850

6.6

10.7

<20

<10

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2.7

160

150

121

66.5

146

__

89

720

440

135

46.6

528

81

170

68

33.6

<200

<100

<20

--

< 2.0

--

<2.0

03/29/98

09/12/98

03/26/99

09/29/99

03/17/00

08/28/00

02/25/01

09/17/01

361.59

361.59

361.59

361,59

361.59

361.59

361.59

361.59

341.11

338.86

339.34

337.67

340.20

336.69

UNABLE TO LOCATE

UNABLE TO LOCATE

20.48

22.73

22.25

23.92

21.39

24.90

4,900

7,400

3,490

3,820

4.680

7,700

400

900

441

455

510

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540

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Table 1
Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542

				· · · · · · · · · · · · · · · · · · ·		Dublin, Cal	ifornia						
WELL ID/	TOC*	GWE	DTW	TPH-GRO	B		E	X	MTBE	TOG	1,2-DCA	EDB	HVOCs
DATE	(fi)	(msl)	(ft.)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	.: (µg/L) ::	(µg/L)	(ug/L)	(μg/L)	(µg/L)	(μg/L)
MW-9 (cont)													
03/25/02	361.59	339.78	21.81	8,000	730	4.4	120	380	<13				
09/16/02	361.59	336.97	24.62	4,400	420	<5.0	25	29	19				
03/18/03	361.59	339.08	22.51	3,600	510	<2.0	16	10	<10/16	***	***		
09/18/03 ¹⁶	361.59	337.34	24.25	5,300	530	0.8	32	29	1		_		
03/24/04 ¹⁶	361.59	339.35	22.24	4,500	290	0.6	17	31	0.9				
09/16/04 ¹⁶	361.59	336.66	24.93	4,000	400	5	11	10	<1			 	
03/23/05 ¹⁶	361.59	341.11	20.48	5,100	190	0.6	21	29	1				
09/02/0516	361.59	337.53	24.06	4,700	340	0.5	9	6	0.9		_		
03/24/06	361.59	INACCESSIB	LE - POSSII	•		***	-						
DESTROYED	- 2006										-		
MW-10													
06/27/96	358.02		20.74	<50	< 0.5	<0.5	<0.5	<0.5	<5.0	****			
09/30/96	358.02	335.99	22.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0				
12/30/96	358.02	337.46	20.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0				
03/11/97	358.02	338.09	19.93	<50	<0.5	<0.5	<0.5	<0.5	7.0				
06/10/97	358.02	336.37	21.65	<50	< 0.5	<0.5	<0.5	<0.5	5.3				
10/01/97	358.02	335.50	22.52	<50	< 0.5	< 0.5	<0.5	<0.5	<5.0		***		
12/17/97	358.02							**					
03/29/98	358.02	340.55	17.47	< 50	< 0.5	<0.5	<0.5	<0.5	4.3			75	
09/12/98	358.02	337.39	20.63	<50	< 0.5	<0.5	<0.5	<0.5	3.8		•••		
03/26/99	358.02	337.98	20.04	<50	<0.5	<0.5	<0.5	<0.5	4.15				
09/29/99	358.02	336.30	21.72	5,020	547	<10	79.6	49.5	<100		<u></u>	_	***
03/17/00	358.02	338.67	19.35	<50	<0.5	<0.5	<0.5	<0.5	<5.0				
08/28/00	358.02	335.88	22.14	<50	< 0.50	< 0.50	<0.50	< 0.50	<2.5	<u></u>	-		
02/25/01	358.02	INACCESSIB		-					-				
09/17/01	358.02	335.41	22.61	<50	<0.50	< 0.50	<0.50	<1.5	<2.5				
03/25/02	358.02	338.64	19.38	<50	<0.50	< 0.50	< 0.50	<1.5	<2.5				
09/16/02	358.02	335.68	22.34	<50	<0.50	<0.50	< 0.50	<1.5	3.1				
03/18/03	358.02	338.11	19.91	<50	<0.50	< 0.50	< 0.50	<1.5	<2.5/2 ⁶				
09/18/03 ¹⁶	358.02	336.10	21.92	<50	<0.5	<0.5	<0.5	<0.5	2	-			
03/24/04 ¹⁶	358.02	338.18	19.84	<50	<0.5	<0.5	<0.5	<0.5	0.5				
09/16/04 ¹⁶	358.02	335.39	22.63	<50	<0.5	<0.5	<0.5	<0.5	0.9				
	556.02	555.59	44.00	-50	~0.5	-0.5	~V.J	~0.5	v.y	-		-	

Chevron Service Station #9-5542 7007 San Ramon Road

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Dublin.	f 'a	litornia.	

No. No.	WELL ID	TOC*	GWE	DTW	TPH-GRO	В	T. T.	norma E	X	MTBE	TOG	on and springs are a com-	· Shirthead and	
MW-10 (cont 1973/3016 158.02 339.73 18.29 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.8					.*.*.*.*.*.*	*,*,*,*,*,* * * * * * * *				. 		1,2-DCA	EDB	HVOCs
03/23/05/6 358.02 339.73 18.29 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.7 <					176: -7		(66/2/		Mrg/L)	(10g/L)	με/L)	(µg/L)	(Hg/L)	(μg/.L)
09020916 358.02 336.30 21.72 <30 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.8														
DESTROYED - 2006 STACKESSIBLE - POSSIBLY DESTROYED									<0.5	0.7		**	***	
MW-5							<0.5	<0.5	<0.5	0.8		_		
MW-5 06721/91 359.95 336.78 23.17 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5			INACCESSIB	LE - POSSIB	LY DESTRO	OYED					-			tres
06/21/91 359.95 336.78 23.17 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	DESTROYED -	2006												
06/21/91 359.95 336.78 23.17 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	MW 5													
06/21/91 359.95		350.05	116 78	22 17	~50	~0.5	~0.5	Z0.5	40 E					
07/17/91 359.95 336.27 23.68													~=	3
09/20/91 359.95													**	ND
10/04/91 359.95 334.75 25.20					_									_
12/19/91 359.95 334.75 25.20 <50 0.7 0.7 <0.5 1.4													~=	
03/19/92													-	
06/19/92 360.28 336.86 23.42 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5														
09/22/92 360.28 335.31 24.97 150 13 34 5.0 26 — — — — — — — — — — — — — — — — — —										**				
12/18/92												-		
03/10/93										_	-		_	
03/22/93											-			
06/14/93 360.28 337.57 22.71					<50	<0.5	<0.5	<0.5	<0.5		-		-	
07/25/93 360.28 338.29 21.99 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5						****	-	-			-		-	
09/23/93 360.28 336.80 23.48 <50 3.0 1.0 1.0 2.0											***			
12/22/93											-			
03/21/94 360.28 337.10 23.18 <50 2.4 1.4 <0.5 2.0										-	-			
06/29/94 360.28 <50							<0.5					***	**	
07/06/94 360.28 335.87 24.41			337.10	23.18								-		-
09/22/94 360.28 335.50 24.78 <50					<50	<0.5	< 0.5	<0.5	1.0					
12/08/94 360.28 336.86 23.42 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <			335.87										·	
03/06/95								< 0.5						-
06/08/95 360.28 339.52 20.76 <50												**	-	
09/13/95 360.28 337.12 23.16 <50									19				***	
12/16/95 360.28 INACCESSIBLE -PAVED OVER <				20.76			< 0.5	<0.5	<0.5			·		
03/28/96 360.28 INACCESSIBLE -PAVED OVER <		360.28	337.12	23.16	<50	< 0.5	< 0.5	<0.5	<0.5	-			_	
06/27/96 360.28 INACCESSIBLE -PAVED OVER <														
09/30/96 360.28 INACCESSIBLE -PAVED OVER		360.28						~			-			
12/30/96 360.28 INACCESSIBLE -PAVED OVER	06/27/96	360.28	INACCESSIB	LE -PAVED	OVER									
	09/30/96	360.28	INACCESSIB	LE -PAVED	OVER				**					
	12/30/96	360.28	INACCESSIB	LE -PAVED	OVER									
	03/11/97	360.28												

Chevron Service Station #9-5542

7007 San Ramon Road

December 2 - Carrier 1 - 1 - 1						Dublin, Cali	itornia						
WELL ID/	TOC*	GWE	DTW	TPH-GRO	В	T	E.	*	MTBE	TOG	1,2-DCA	EDB	HVOCs
DATE	(fi.)	(msl)	(ft)	(μg/L)	(μg/L)	(μg/L)	(µg/L).	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)
MW-5 (cont)													
06/10/97	360.28	INACCESSIB	LE -PAVED	OVER				***			-	4-	
10/01/97	360.28	INACCESSIB	LE -PAVED	OVER			_			- -		_	
12/17/97	360.28	DISCONTINU	JED										
03/26/99	360.28	INACCESSIB	LE -PAVED	OVER								_	
NOT MONITOR	RED/SAMI												
MW-6													
06/21/91	360.22	336.67	23.55	3,700	50	2.6	150	240					
06/21/91	360.22	330.07	23.33	-	50	2.6	150	340				***	3
07/17/91	360.22	336.22	24.00		***						<0.5		ND^3
09/20/91	360.22	330.22		7 700		 -0.5				***	7-		
10/04/91	360.22	334.93	 25.29	3,200	28	<0.5	140	100			-		**
12/19/91	360.22	334.88		200	- 2.5		-	•••					***
03/19/92	360.22		25.34	380	2.7	4.0	15	10		-			
06/19/92		338.17	22.05	3,400	57	4.5	330	360		**			
	360.58	337.06	23.52	980	11	4.2	57	38				***	
09/22/92	360.58	334.98	25.60	1,100	22	4 i	77	58	***	***			***
12/18/92	360.58	336.40	24.18	1,900	3.2	1.3	58	47					
03/10/93	360.58	-		1,400	30	9.0	8.0	22					
03/22/93	360.58	341.22	19.36			, 							
06/14/93	360.58	337.10	23.48			-	77.0				-	10-sh	
07/25/93	360.58	338.28	22.30	8312	<0.5	<0.5	<0.5	<0.5		Miles			
09/23/93	360.58	337.38	23.20	200	6.0	2.0	3.0	3.0					
12/22/93	360.58	336.67	23.91	130	<0.5	1.8	1.2	1.5					
03/21/94	360.58	337.31	23.27	290	3.0	10	1.6	4.7	•				
06/29/94	360.58			300	0.6	1.2	2.4	4.6					
07/06/94	360.58	336.31	24.27	****	_	-	_		-				
09/22/94	360.58	335.74	24.84	2,300	58	3.6	100	290				-	
12/08/94	360.58	336.73	23.85	<50	<0.5	< 0.5	< 0.5	0.9	*****				
03/06/95	360.58	339.67	20.91	360	2.0	3.6	0.9	2.3					
06/08/95	360.58	340.40	20.18	230	< 0.5	< 0.5	1.0	1.6					
09/13/95	360.58	337.05	23.53	88	<0.5	< 0.5	<0.5	1.1			•		
12/16/95	360.58	337.20	23.38	<50	<0.5	< 0.5	< 0.5	<0.5	7.3				
03/28/96	360.58	341.21	19.37	130	< 0.5	< 0.5	<0.5	<0.5	9.2		_	_	
06/27/96	360.58	338.92	21.66	<50	<0.5	<0.5	<0.5	<0.5	5.7				
09/30/96	360.58	337.52	23.06	50	<0.5	<0.5	<0.5	<0.5	6.3		***		
12/30/96	360.58	339.12	21.46	90	< 0.5	< 0.5	<0.5	<0.5	5.5		***		
									-				

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID	· · · · · · · · · · · · · · · · · · ·		entra establica de la composición de l	Character Comment		Dublin, Cal			· · · · · · · · · · · · · · · · · · ·				
	TOC*	GWE	DTW	TPH-GRO	В	1	ĸ	X	MTBE	TOG	1,2-DCA	EDB	HVOCs
DATE	(JL)	(mst)	(fi.)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)
MW-6 (cont)							•						
03/11/97	360.58	339.67	20.91	80	<0.5	< 0.5	< 0.5	< 0.5	<5.0			_	
06/10/97	360.58	337.93	22.65	<50	1.6	2.3	< 0.5	1.2	<5.0			**	
10/01/97	360.58	336.95	23.63	<50	<0.5	<0.5	< 0.5	<0.5	<5.0				
12/17/97	360.58	337.81	22.77	92	0.98	<0.5	0.72	1.6	2.7		**	_	
03/29/98	360.58	342.24	18.34	95 ⁷	< 0.5	< 0.5	< 0.5	<0.5	3.0				
09/12/98	360.58	338.90	21.68	<50	< 0.5	< 0.5	< 0.5	<0.5	<2.5	***			
03/26/99	360.58	339.42	21.16	<50	< 0.5	< 0.5	< 0.5	<0.5	<2.0				***
09/29/99	360.58	337.73	22.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0				
DESTROYED	- 2006											_	_
MW-7													
06/21/91	360.63	337.18	23.45	<50	<0.5	<0.5	<0.5	<0.5					
06/21/91	360.63	_							***	***	<0.5		ND ³
07/17/91	360.63	336.73	23.90					_					
09/20/91	360.63			69	4.4	3.3	1.2	3.9					
10/04/91	360.63	335.60	25.03	**			***		**	***			-
12/19/91	360.63	335.53	25.10	<50	0.9	2.8	1.7	5.9	==	_			
03/19/92	360.63	337.89	22.74	<50	1.1	0.6	0.9	2.5	-				
06/19/92	360.99	INACCESSIB		***			***		***				
09/22/92	360.99	INACCESSIB			_		_						
12/18/92	360.99	INACCESSIB				**	***	•••					
03/22/93	360.99	INACCESSIB				_							
06/14/93	360.99	INACCESSIB						_				**	
07/25/93	360.99	INACCESSIB		40 10.		***	tree						
12/23/93 ¹	361.68	338.01	23.67	<50	0.9	0.5	<0.5	<0.5					***
03/21/94	361.68	337.55	24.13	<50	0.5	1.1	<0.5	1.4	 				
06/29/94	361.68	_		<50	<0.5	<0.5	<0.5	<0.5					
07/06/94	361.68	335.23	26.45					~0.5					
09/22/94	361.68	334.28	27.40	11,000	1,900	230	310	970				-	
12/08/94	361.68	335.45	26.23	<50	<0.5	< 0.5	<0.5	<0.5					
03/06/95	361.68	338.49	23.19	<50	<0.5	<0.5	<0.5 <0.5	<0.5	***				
06/08/95	361.68	339.54	22.14	<50 <50	<0.5	<0.5	<0.5	<0.5					****
09/13/95	361.68	337.13	24.55	<50	<0.5	<0.5	<0.5	<0.5	-			***	-
12/16/95	361.68	335.94	25.74	<50	<0.5	<0.5	<0.5 <0.5	<0.5	<2.5			***	_
03/28/96	361.68	339.96	21.72	<50 <50	<0.5	<0.5	<0.5	<0.5	<2.5 <5.0				
06/27/96	361.68	338.18	23.50	<50	<0.5	<0.5	<0.5 <0.5	<0.5 <0.5		**	***	-	***
UVIZ 1170	201.00	220.10	47.70	~ 50	~0.3	~0.3	~∪. J	<0.5	<5.0	**	***		***

Table 1
Groundwater Monitoring Data and Analytical Results

1000000 0 10000 1000		. Control de la				Dublin, Cali			· · · · · · · · · · · · · · · · · · ·				
WELL ID	TOC*	GWE	DTW	TPH-GRO	В	****** jr ******	ĸ	X	MTBE	TOG	1,2-DCA	EDB	HVOCs
DATE	(fi)	(mst)	(ft.)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L) · ·	(μg/L)	(µg/L)	(μg/L)
MW-7 (cont)													
09/30/96	361.68	336.48	25.20	<50	<0.5	<0.5	<0.5	<0.5	<5.0		70	**-	
12/30/96	361.68	337.80	23.88	<50	< 0.5	< 0.5	<0.5	<0.5	<5.0				****
03/11/97	361.68	338.69	22.99	<50	< 0.5	<0.5	<0.5	<0.5	<5.0				
06/10/97	361.68	336,98	24.70	<50	<0.5	<0.5	<0.5	<0.5	<5.0				
10/01/97	361.68	335.98	25.70	<50	<0.5	<0.5	<0.5	<0.5	<5.0	***			
DESTROYED	- 2006				***			-0.5	13.0				
MW-8													
12/12/91	354.89		22.54	<50	<0.5	<0.5	<0.5	<0.5					
06/19/92	354.89	334,42	20.47	<50	1.2	1.4	0.5	2.9				_	
09/22/92	354.89	325.09	29.80	180	17	42	6.0	31			_		_
12/18/92	354.89	333.71	21.18	<50	<0.5	< 0.5	<0.5	<0.5		_			
03/10/93	354.89		**	<50	0.8	2.0	<0.5	2.0					
03/22/93	354.89	337.98	16.91										
06/14/93	354.89	330.59	24.30		*****				***		**		
07/25/93	354.89	331.12	23.77	<50	<0.5	<0.5	<0.5	<0.5					
09/23/93	354.89	334.49	20.40	<50	1.0	0.9	0.7	1.0					
12/22/93	354.89	333.97	20.92	<50	<0.5	<0.5	<0.5	<0.5					
03/21/94	354.89	334.70	20.19	<50	0.9	1.5	<0.5	2.0					
06/29/94	354.89			<50	<0.5	<0.5	<0.5	0.8					
07/06/94	354.89	333.84	21.05										
09/22/94	354.89	333.05	21.84	9,600	1,600	180	260	840					
10/14/94	354.89	333.05	21.84	<50	<0.5	<0.5	<0.5	<0.5					
12/08/94	354.89	334.18	20.71	<50	<0.5	<0.5	<0.5	<0.5				_	_
03/06/95	354.89	336.78	18.11	<50	<0.5	<0.5	<0.5	<0.5				****	
06/08/95	354.89	337.10	17.79	<50	<0.5	<0.5	<0.5	< 0.5					
09/13/95	354.89	335.09	19.80	<50	<0.5	<0.5	<0.5	<0.5			<u>-</u> _		
12/16/95	354.89	334.43	20.46	<50	<0.5	<0.5	<0.5	<0.5	<2.5				
03/28/96	354.89	339.47	15.42	<50	<0.5	<0.5	<0.5	<0.5	<5.0			***	
06/27/96	354.89	335.81	19.08	<50	<0.5	<0.5	<0.5	<0.5	<5.0				
09/30/96	360.58	340.28	20.30	<50	<0.5	<0.5	<0.5	0.6	<5.0				
12/30/96	360.58	341.55	19.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0				
03/11/97	360.58	342.17	18.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0 <5.0			****	
06/10/97	360.58	340.67	19.91	< 50	<0.5	<0.5	<0.5 <0.5	<0.5	<5.0				-
10/01/97	360.58	339.87	20.71	<50	<0.5	<0.5	<0.5 <0.5	<0.5	<5.0			***	
DESTROYED		227.07	20.71	-50	-0.5	~0.3	しいり	C.V~	~ J.U				
	2000												

Table 1 Groundwater Monitoring Data and Analytical Results Chevron Service Station #9-5542

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WELL ID/	TOC*					Dublin, Cal			14 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				
*		GWE	DTW	TPH-GRO	B .	T		X	MTBE	TOC	1,2-DCA	EDB	HVOCs
DATE	(/1.)	(msl)	(ft)	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(pg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
BAILER BLA	NK												
05/31/91		•		<50	< 0.5	< 0.5	<0.5	< 0.5			heen		**
06/21/91	_		-	<50	< 0.5	< 0.5	<0.5	< 0.5		***			
09/20/91			•••	<50	< 0.5	< 0.5	<0.5	<0.5					
12/19/91				<50	< 0.5	< 0.5	<0.5	<0.5	***	-			==
03/19/92				<50	< 0.5	< 0.5	< 0.5	< 0.5					
06/19/92				<50	< 0.5	< 0.5	<0.5	<0.5		***			
09/22/92		***	_	<50	< 0.5	< 0.5	< 0.5	0.8	-				_
12/21/92		***		<50	< 0.5	< 0.5	< 0.5	<0.5					
03/10/93			l*m	<50	< 0.5	< 0.5	< 0.5	< 0.5					***
TRIP BLANK	(
03/22/93				<50	< 0.5	< 0.5	< 0.5	0.6				**	
07/25/93	-			<50	< 0.5	< 0.5	< 0.5	< 0.5					
09/23/93	**			<50	<0.5	< 0.5	< 0.5	< 0.5			₩=		
12/22/93			₩#	<50	< 0.5	< 0.5	<0.5	< 0.5		w-			
03/21/94				<50	<0.5	< 0.5	< 0.5	<0.5	***				
05/31/91				<50	<0.5	< 0.5	< 0.5	< 0.5			***		
06/21/91				<50	< 0.5	< 0.5	< 0.5	<0.5		***			
09/20/91		_		<50	< 0.5	< 0.5	< 0.5	< 0.5					
12/19/91				<50	< 0.5	< 0.5	< 0.5	< 0.5		_	***		
03/19/92				<50	< 0.5	<0.5	<0.5	< 0.5				•••	
06/19/92			***	<50	< 0.5	<0.5	< 0.5	< 0.5	**				
09/22/92	•••			92 ¹⁴	<0.5	< 0.5	< 0.5	< 0.5					
12/18/92				<50	< 0.5	<0.5	< 0.5	< 0.5					
03/10/93			_	<50	< 0.5	<0.5	<0.5	< 0.5				***	
03/22/93				<50	< 0.5	< 0.5	<0.5	< 0.5			••		
07/25/93				<50	< 0.5	<0.5	< 0.5	< 0.5					
09/23/93			_	<50	<0.5	< 0.5	< 0.5	< 0.5					
12/22/93	-	***		<50	<0.5	< 0.5	< 0.5	< 0.5				***	_
03/21/94		***		<50	<0.5	< 0.5	<0.5	<0.5					***
06/29/94		_	•••	<50	< 0.5	< 0.5	<0.5	< 0.5		4m2 3m2			
07/01/94	***			<50	< 0.5	< 0.5	<0.5	<0.5		***			
07/06/94				<50	< 0.5	< 0.5	< 0.5	<0.5	***				
09/22/94				<50	<0.5	<0.5	< 0.5	<0.5					
12/08/94				<50	<0.5	<0.5	<0.5	<0.5					
03/06/95		-		<50	< 0.5	<0.5	< 0.5	< 0.5					

Chevron Service Station #9-5542 7007 San Ramon Road

***********	· · · · · · · · · · · · · · · · · · ·					Dublin, Cali	ifornia						
WELL ID	TOC*	GWE	DTW	TPH-GRO	В	r	ĸ	X	MTBE	TOC	1,2-DCA	EDB	HVOCs
DATE	(ft.)	(msl)	(fL)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)
TRIP BLANK	(cont)												
06/08/95	·	***		<50	<0.5	<0.5	<0.5	<0.5					
09/13/95	_			<50	<0.5	<0.5	<0.5	<0.5	***				
12/16/95				<50	<0.5	<0.5	<0.5	<0.5	<2.5				
03/28/96				<50	< 0.5	<0.5	<0.5	<0.5	<5.0				
06/27/96		_		<50	< 0.5	<0.5	<0.5	<0.5	<5.0		•••	**	
09/30/96				<50	< 0.5	< 0.5	<0.5	<0.5	<5.0				
12/30/96				<50	< 0.5	< 0.5	<0.5	<0.5	<5.0				
03/11/97				<50	<0.5	<0.5	<0.5	<0.5	<5.0				
06/10/97				<50	< 0.5	< 0.5	<0.5	<0.5	<5.0	***	49.44		_
10/01/97				<50	<0.5	< 0.5	<0.5	< 0.5	<5.0				
12/17/97				<50	<0.5	<0.5	<0.5	<0.5	<2.5			***	
03/29/98				<50	< 0.5	< 0.5	<0.5	<0.5	<2.5				-
09/12/98				<50	<0.5	< 0.5	< 0.5	<0.5	<2.5	•••			
03/26/99				<50	< 0.5	< 0.5	<0.5	<0.5	<2.0		•••	**	
09/29/99				<50	<0.5	< 0.5	<0.5	<0.5	<5.0		**	**	
08/28/00	- -			<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5				
02/25/01				<50	< 0.50	<0.50	<0.50	< 0.50	<2.5		-		
09/17/01				<50	< 0.50	< 0.50	< 0.50	<1.5	<2.5				
03/25/02				<50	< 0.50	<0.50	< 0.50	<1.5	<2.5				
09/16/02				<50	<0.50	<0.50	< 0.50	<1.5	<2.5		**		·
03/18/03				<50	<0.50	<0.50	< 0.50	<1.5	<2.5				
09/18/03 ¹⁶				<50	<0.5	<0.5	<0.5	<0.5	< 0.5	_			
03/24/04 ¹⁶	-	***		<50	< 0.5	<0.5	< 0.5	< 0.5	<0.5				
09/16/04 ¹⁶	44			<50	<0.5	<0.5	<0.5	<0.5	<0.5				
03/23/05 ¹⁶				<50	<0.5	<0.5	<0.5	< 0.5	<0.5		**		
09/02/0516				<50	< 0.5	< 0.5	<0.5	<0.5	<0.5	-			
03/24/06 ¹⁶				<50	<0.5	<0.5	<0.5	<0.5	<0.5				
08/24/06 ¹⁶				<50	< 0.5	<0.5	<0.5	<0.5	<0.5		**		
QA 													
12/29/06 ¹⁶				<50	<0.5	<0.5	<0.5	<0.5	<0.5				
03/01/07 ¹⁶				<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	_		
09/06/07 ¹⁶				<50	<0.5	<0.5	<0.5	<0.5	<0.5			-	~~
03/10/08 ¹⁶		**	•	<50	<0.5	<0.5	<0.5	<0.5	<0.5				_

Chevron Service Station #9-5542

	*******				· · · · · · · · · · · · · · · · · · ·	Dublin, Cal	ifornia						
WELL ID/	TOC*	GWE	DTW	TPH-GRO	B		9 (5 () (2 (1) (-)	x ::::::	MTBE	TOG	12-DCA	FDR	HVOC
DATE	an	(msl)	(6)	(no/L)	fuo/I	Gro AY	Graff Y	Com It	1-1-17				
1-4	<u> </u>			3.3		145/20/	14.	Jug/ss/	(Hg/L)	HP/L)	$(\mu g/L)$	(JLQ/L)	(µg/L)
QA (cont)													
09/02/08 ¹⁶		***		<50	< 0.5	<0.5	<0.5	<0.5	<0.5				
03/18/0916				<50	< 0.5	<0.5	< 0.5	< 0.5	< 0.5				
09/01/0916		+		<50	< 0.5	< 0.5	<0.5	<0.5	<0.5				
DISCONTINUE	D												

Table 1

Groundwater Monitoring Data and Analytical Results

Chevron Service Station #9-5542 7007 San Ramon Road

Dublin, California

EXPLANATIONS:

Groundwater monitoring and laboratory analytical results prior to August 28, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of CasingB = BenzeneEDB = Ethylene dibromide (ft.) = FeetT = Toluene HVOCs = Halogenated Volatile Organic Compounds GWE = Groundwater Elevation E = Ethylbenzene -= Not Measured/Not Analyzed (msl) = Mean sea level X = Xylenes(D) = Duplicate DTW = Depth to Water MTBE = Methyl tertiary butyl ether (μg/L) = Micrograms per liter TPH = Total Petroleum Hydrocarbons TOG = Total Oil and Grease (ppb) = Parts per billion GRO = Gasoline Range Organics 1,2-DCA = 1,2-Dichloroethane QA = Quality Assurance/Trip Blank

- * TOC elevations for MW-1, MW-4, and MW-11 were surveyed on January 3, 2007, by Virgil Chaves Land Surveying. The benchmark for this survey was a bronze disk established by the USGS, located under a manhole cover in the left turn lane in front of Mervyn's on Dublin Blvd. Benchmark Elevation = 347.622 feet (NGVD 29).
- TOC elevation surveyed by Ron Miller, PE #15816, on January 13, 1994.
- Monitoring well part of remediation system.
- All other HVOCs were not detected at detection limits ranging from 0.5 to 1 ppb.
- Sample analyzed for Volatile Organic Compounds (VOCs) by EPA method 8260. MTBE was detected at 10.1 ppb, and all other VOCs were ND ranging from <2.0 to <1000 ppb.
- Oxygenate compounds were not detected.
- 6 MTBE by EPA Method 8260.
- Chromatogram pattern indicated an unidentified hydrocarbon.
- 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.
- ⁹ TPH-GRO and BTEX results are estimated concentrations. Due to laboratory error, sample was analyzed past the recommended holding time. (GTEL).
- Laboratory report indicates uncategorized compound is not included in gasoline concentration.
- Sampled analyzed for VOCs by EPA method 8260, all other results were ND ranging from <40 to <20,000 ppb.
- Uncategorized compound not included in gasoline total.
- Monitoring well surveyed by Ron Miller, PE #15816, on July 5, 1994.
- Gasoline range concentration reported. The chromatogram shows only a single peak in the gasoline range.
- Laboratory report indicates gasoline C6-C12.
- BTEX and MTBE by EPA Method 8260.
- Well development attempted; well dewatered.

Table 2
Groundwater Analytical Results - Oxygenate Compounds

WELL ID	DATE	ETHANOL	TBA	MTBE			
TO THE CONTRACT OF THE CONTRAC	######################################	(µg/L)			DIPE	ETBE	TAME
	<u>ers sam isteristere rateratera feriore terbetari alla fariore</u>		(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
MW-1	03/18/03	<50	<5	<0.5	<0.5	<0.5	< 0.5
	09/18/03	<200		<2			***
	03/24/04	<50		<0.5			
	09/16/04	<130		<1			
	03/23/05	<50	==	< 0.5			=
	09/02/05	<50		<0.5			
	03/24/06	<50	**	<0.5	=47		
	08/24/06	<50		< 0.5		**	
	03/01/07	<500		<5	•••		
	09/06/07	<130		<1		**	
	03/10/08	<500		<5			
	09/02/08	<250	***	<3		_	
	03/18/09	<250		<3			
	09/01/09			< 0.5		at-y 840	
	03/03/10	444		<5	**		**
	09/08/10	-	-	<10	-		-
MW-4	09/18/03	<50	ato-re-	1			
	03/24/04	<100		1		-	
	09/16/04	<50	==	0.7			
	03/23/05	<50		1		_	
	09/02/05	<100	***	<1		-	
	03/24/06	<50	#1.4k	0.9			
	08/24/06	<250		<3			
	03/01/07	<50		<0.5	**		_
	09/06/07	<50		<0.5		****	
	03/10/08	<50		<0.5	=+-		_
	09/02/08	<50		<0.5		es to	
	03/18/09	<50	_	<0.5			
	09/01/09			<0.5	**		**
	03/03/10			<0.5		m-a	_
	09/08/10			<0.5		***	

Table 2
Groundwater Analytical Results - Oxygenate Compounds

	**************************************		Dublin, C	Lalifornia			
WELL ID:	DATE	ETHANOL	TBA	MTBE	DPT	ETBE	TAME
		(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)
MW-11	12/29/06	<50	**	<0.5			
	03/01/07	<50		< 0.5			
	09/06/07	<50	- .	< 0.5	***	**	
	03/10/08	<50		< 0.5			· ••
	09/02/08	<50		< 0.5	**		-
	03/18/09	<50		< 0.5		****	
	09/01/09			< 0.5			
	03/03/10			< 0.5			
	09/08/10	-	-	<0.5			-
MW-2	03/18/03	<100	<10	1	<1	<1	<1
MW-9	03/18/03	<50	<5	1	<0.5	<0.5	<0.5
	09/18/03	<50	_	1			÷=
	03/24/04	<50	••	0.9		 y.	
	09/16/04	<100	==	<1			
	03/23/05	<50		1		==	
	09/02/05	<50		0.9			
	03/24/06 DESTROYED - 20	INACCESSIBLE/POSS	IBLY DESTROYED	1	w-ut		
3.6777 4.0			_				
MW-10	03/18/03	<50	<5	2	<0.5	<0.5	<0.5
	09/18/03	<50		2	94VI		
	03/24/04	<50		0.5			***
	09/16/04	<50		0.9			
	03/23/05	<50		0.7		~₩	
	09/02/05	<50		0.8			
	03/24/06 DESTROYED - 20	INACCESSIBLE/POSS 906	IBLY DESTROYED	•	4014		

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Chevron Service Station #9-5542 7007 San Ramon Road Dublin, California

EXPLANATIONS:

ANALYTICAL METHOD:

TBA = t-Butyl alcohol

MTBE = Methyl Tertiary Butyl Ether

DIPE = di-Isopropyl ether ETBE = Ethyl t-butyl ether TAME = t-Amyl methyl ether $(\mu g/L)$ = Micrograms per liter

(D) = Duplicate
-- = Not Analyzed

EPA Method 8260 for Oxygenate Compounds

ATTACHMENT C HISTORICAL POTENTIOMETRIC MAPS

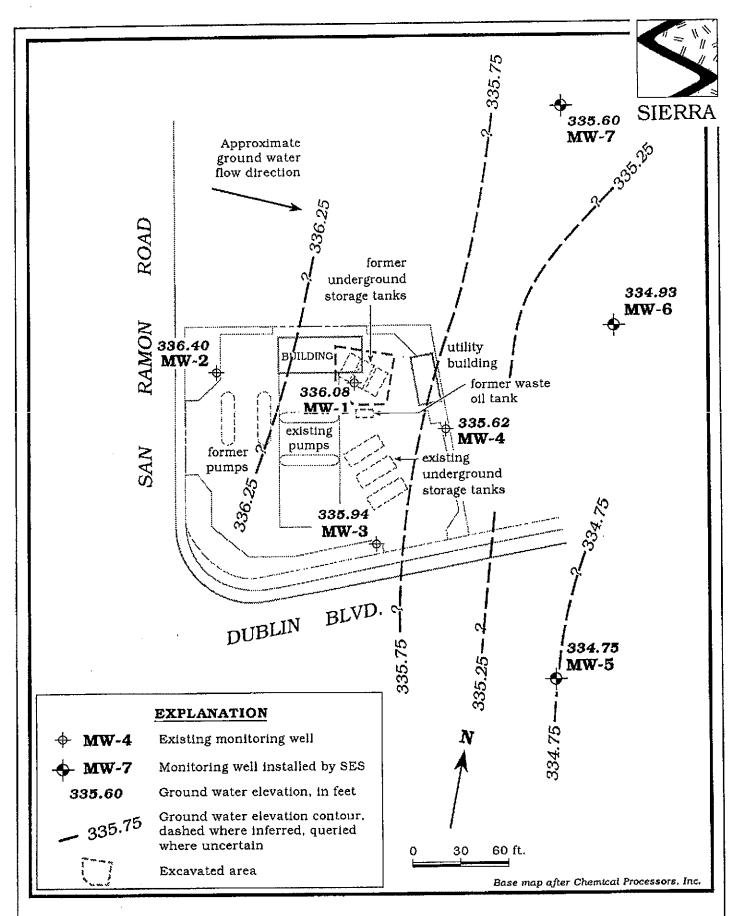


Figure 2. Monitoring Weil Location and Ground Water Elevation Contour Map - October 4, 1991 - Chevron Service Station #9-5542 - 7007 San Ramon Road, Dublin, California

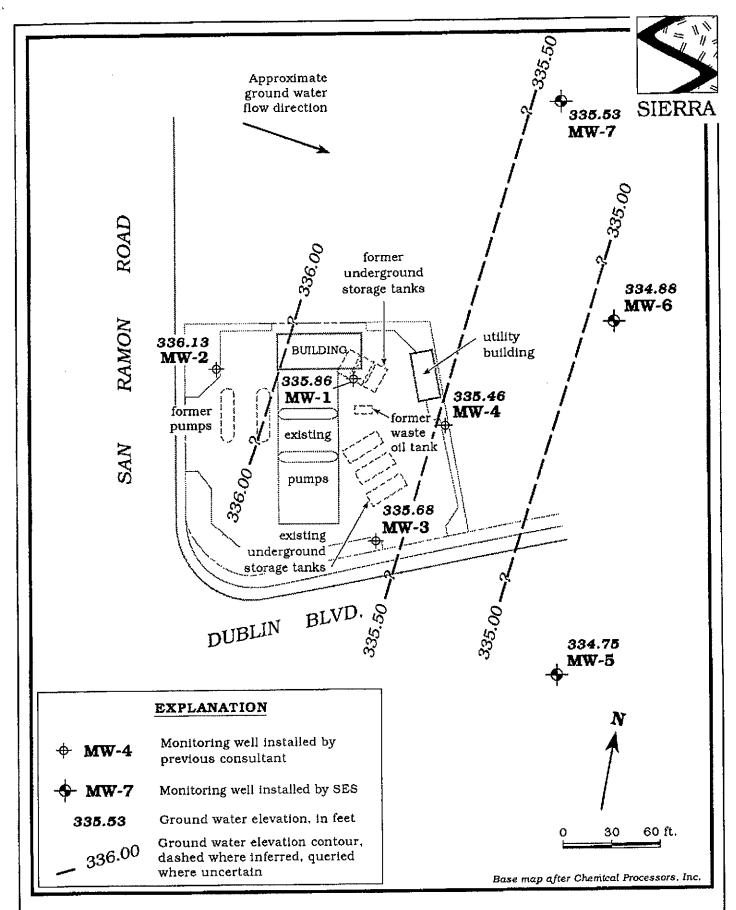


Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - December 19, 1991 - Chevron Service Station #9-5542 - 7007 San Ramon Road, Dublin, California

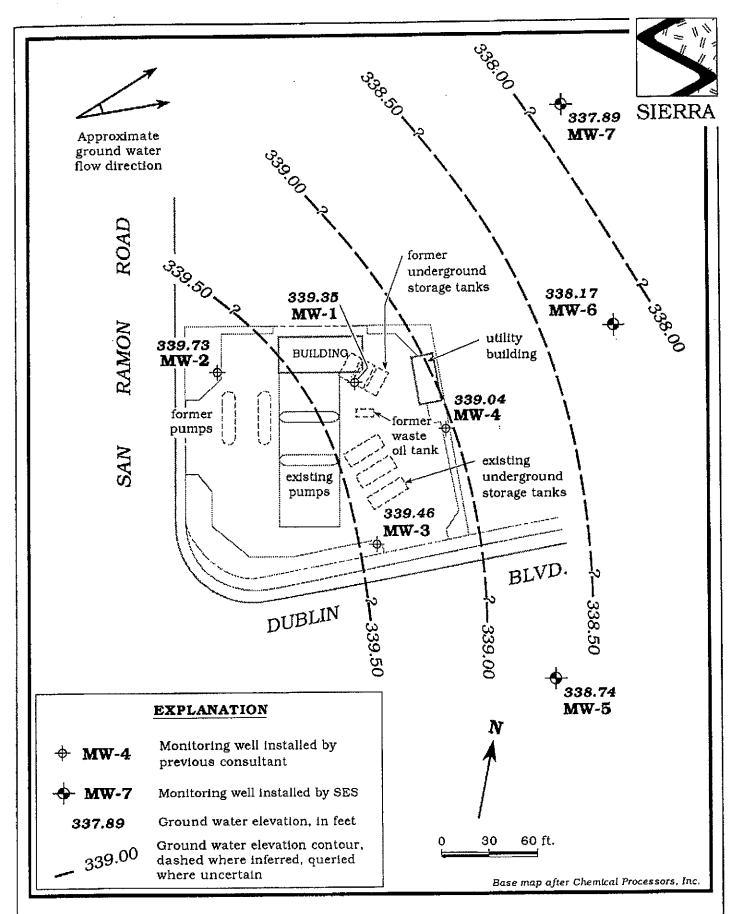


Figure 2. Monitoring Well Locations and Ground Water Elevation Contour Map - March 19, 1992 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

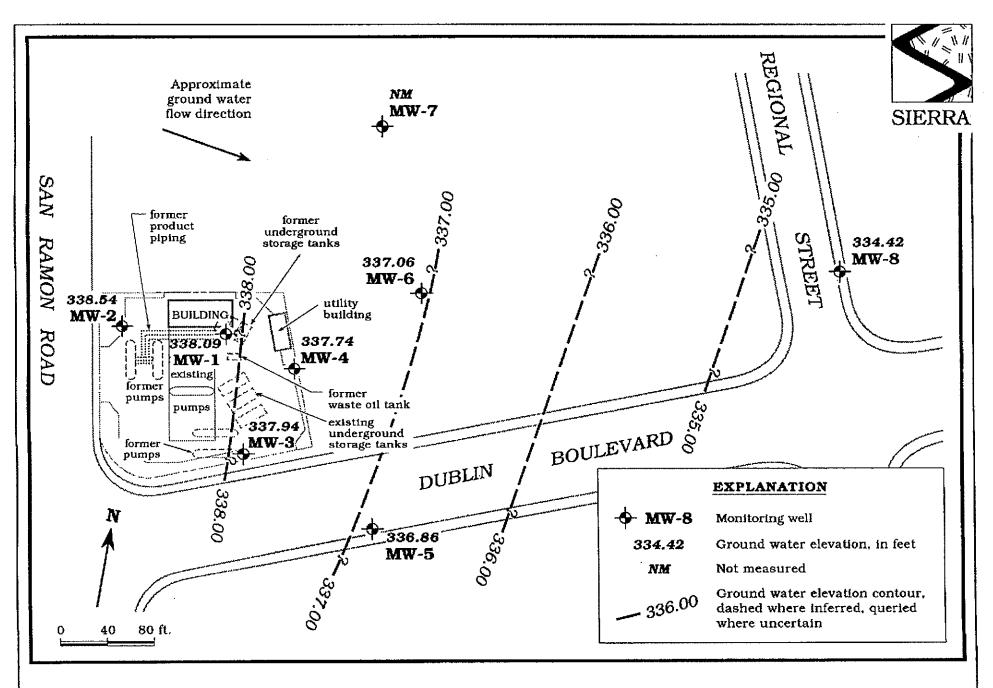


Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - June 19, 1992 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

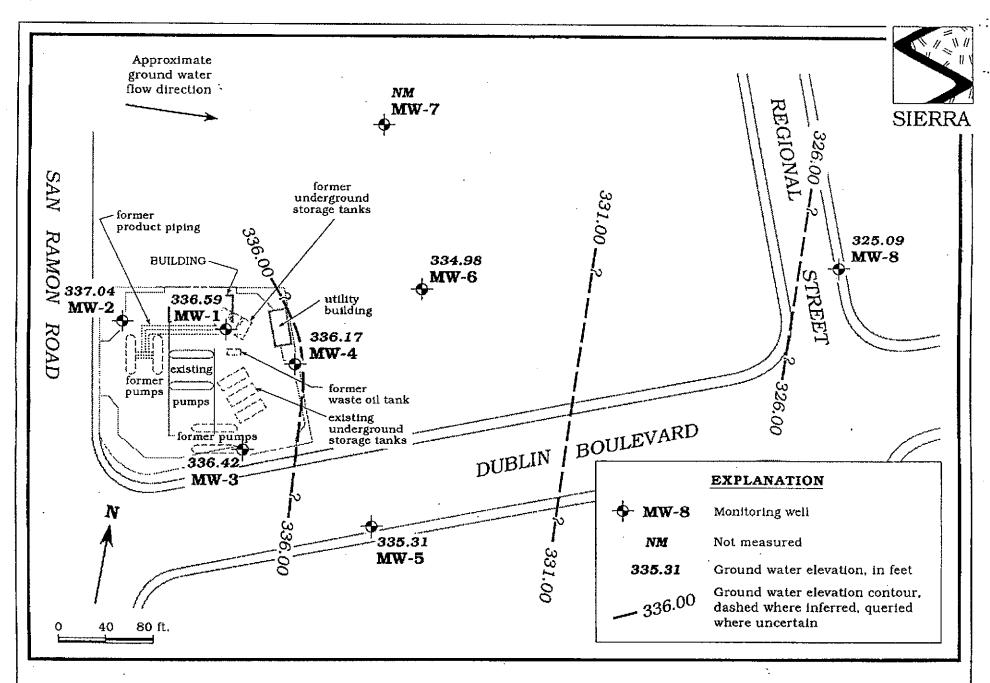


Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - September 22, 1992 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

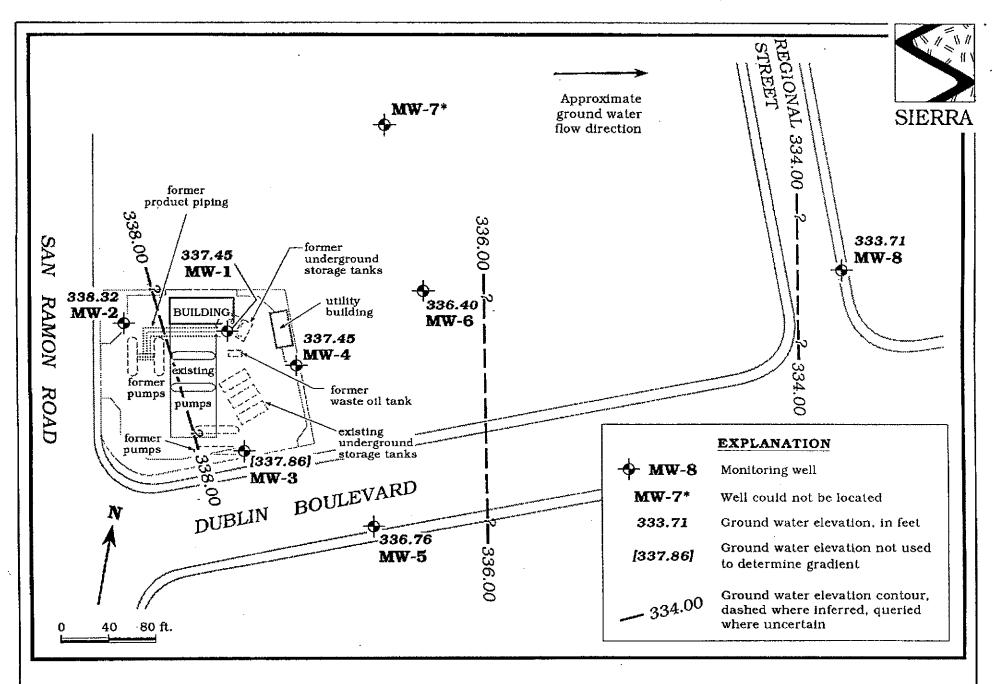


Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - December 18, 1992 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

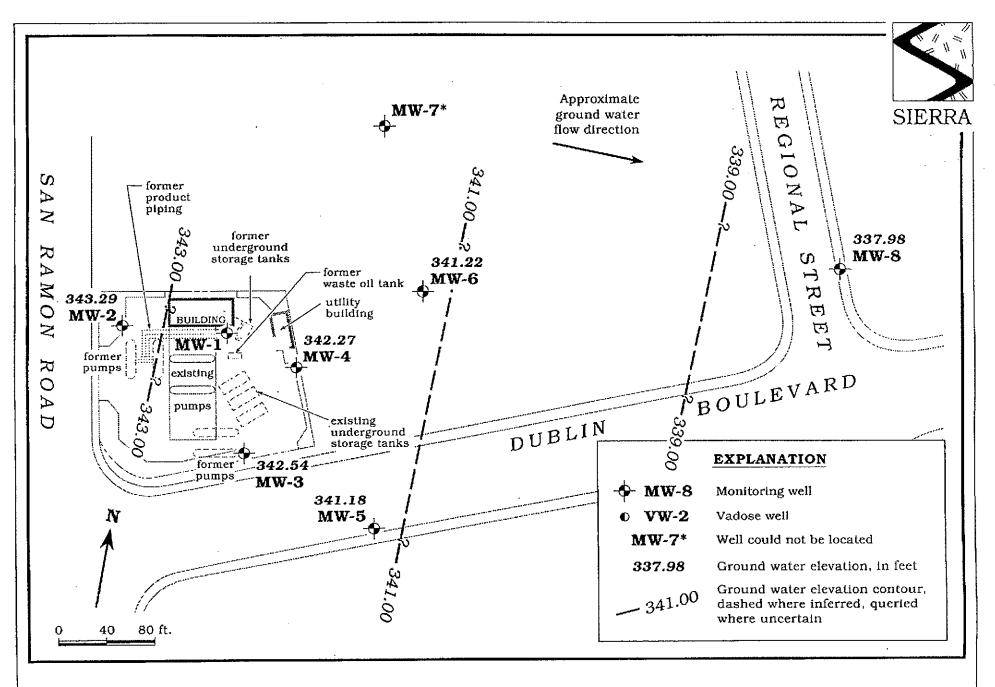


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - March 22, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

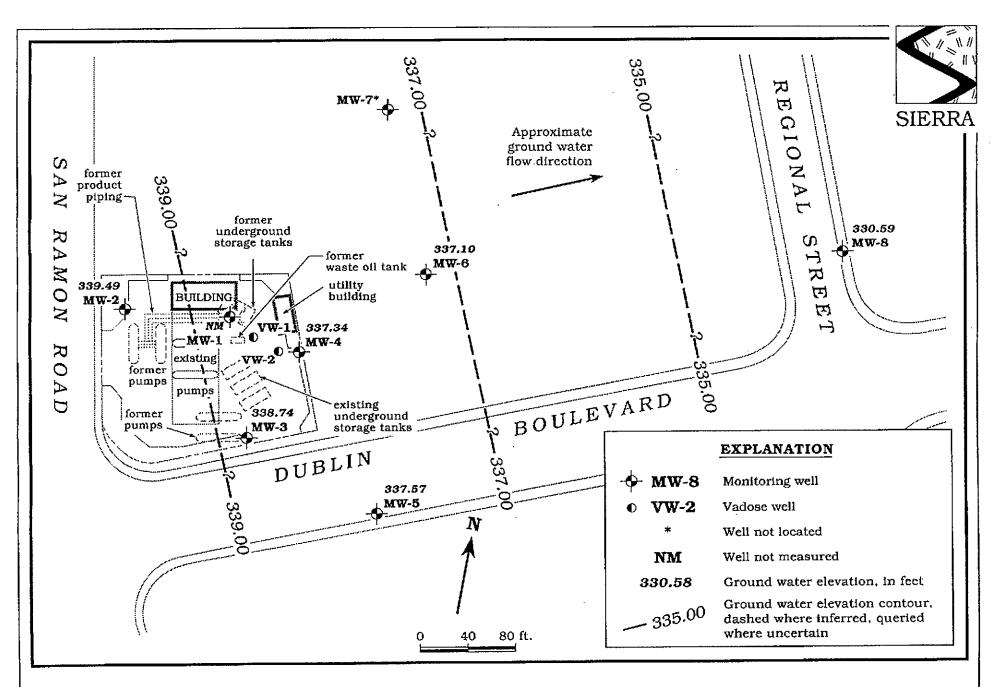


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - June 14, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

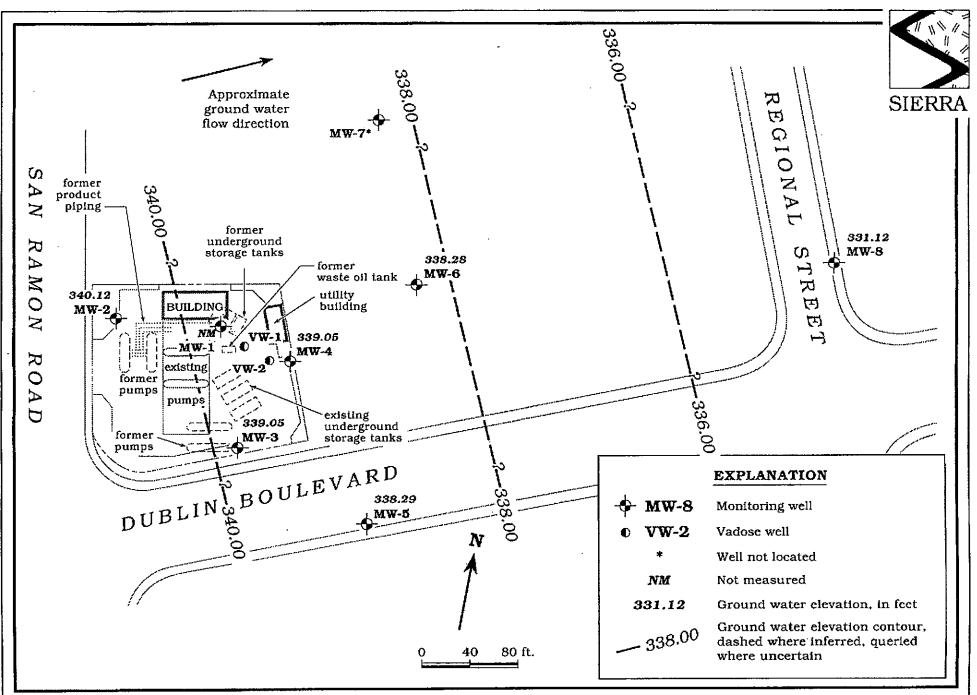


Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - July 25, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

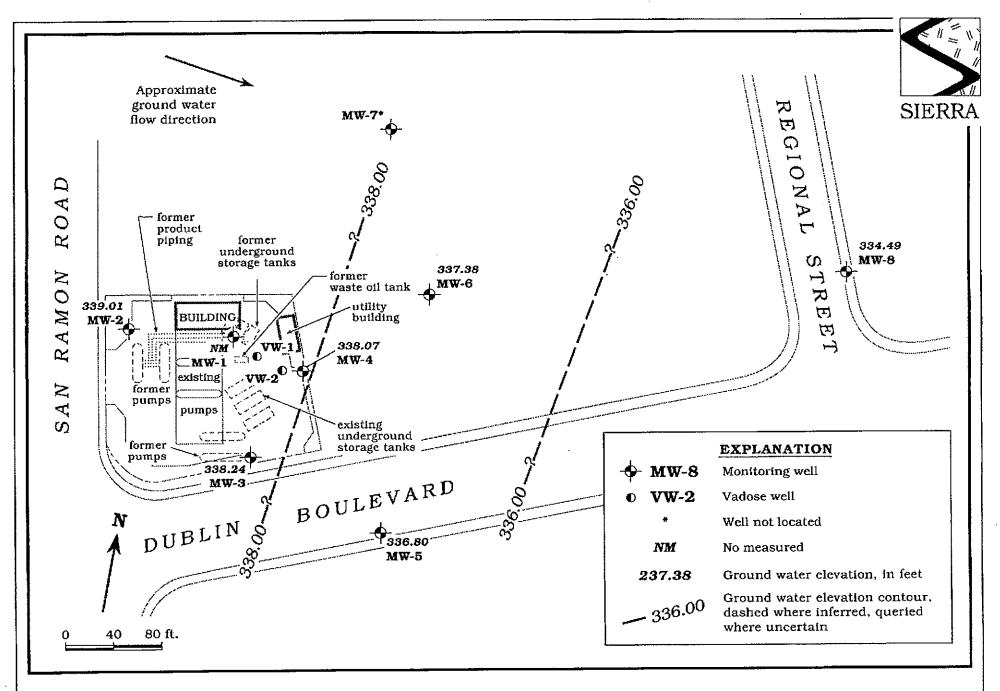


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - September 23, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

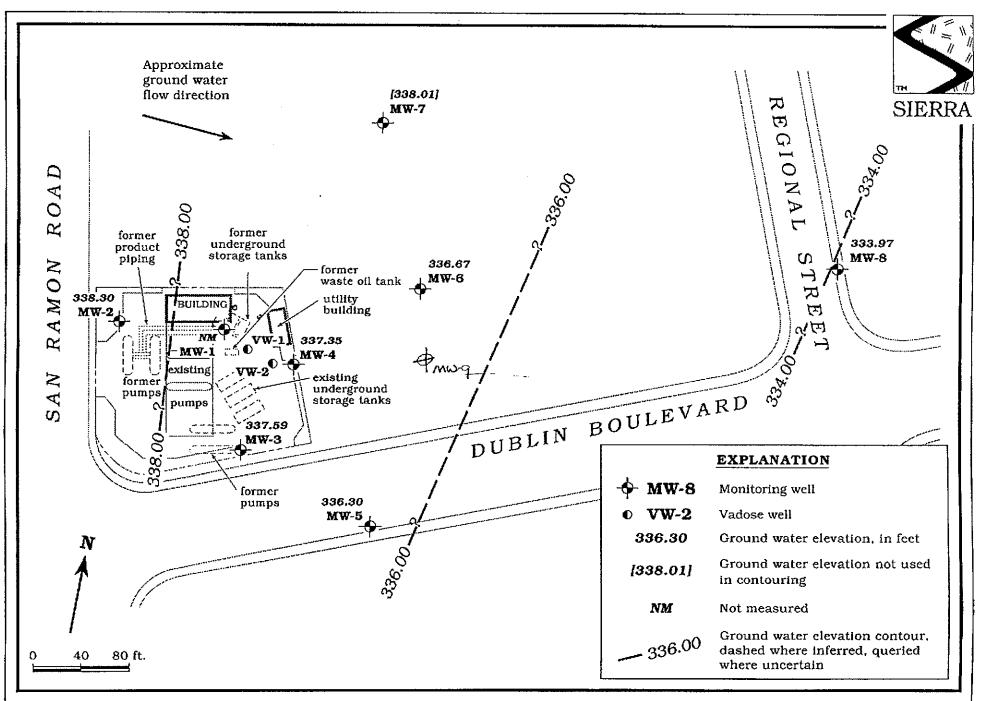


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - December 22, 1993 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

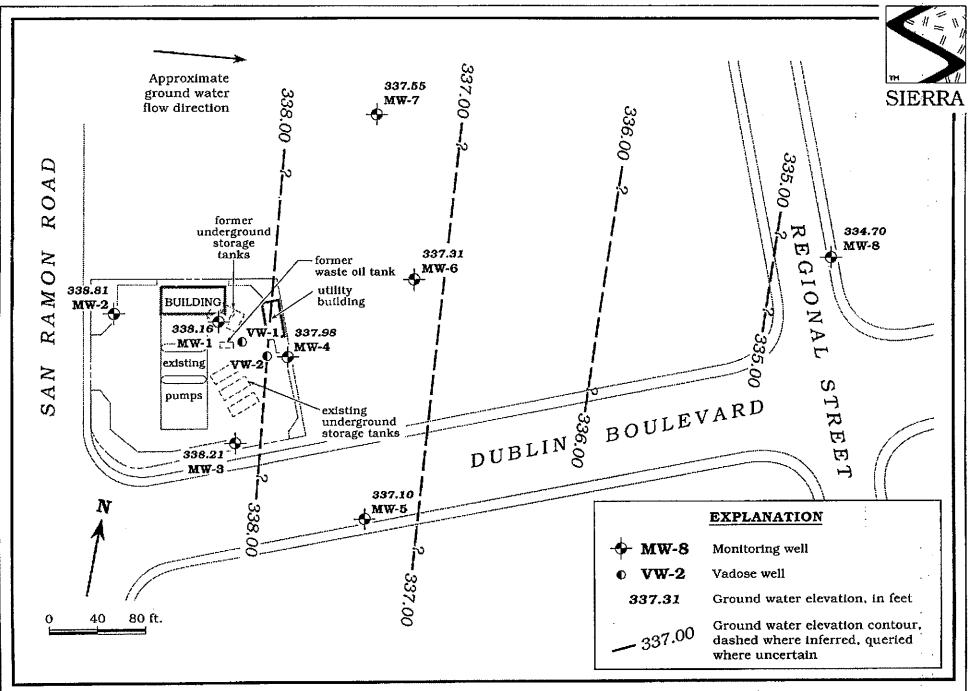


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - March 21, 1994 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

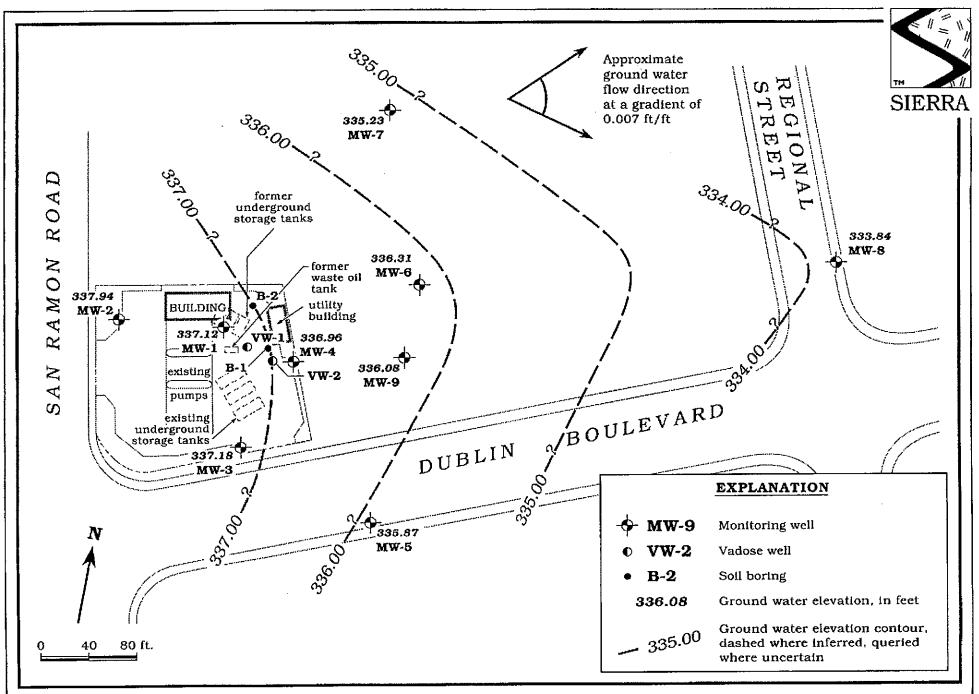


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - July 6, 1994 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California

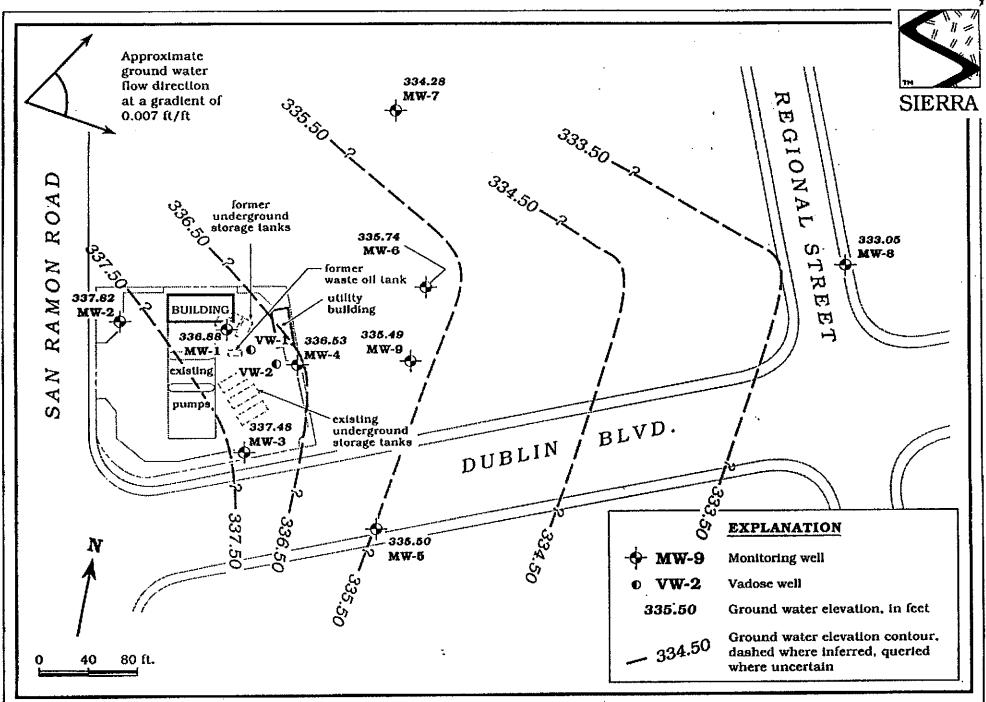


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - September 22, 1994 - Chevron Service Station #9-5542.

7007 San Ramon Road, Dublin, California

1-214-04 10/20/94

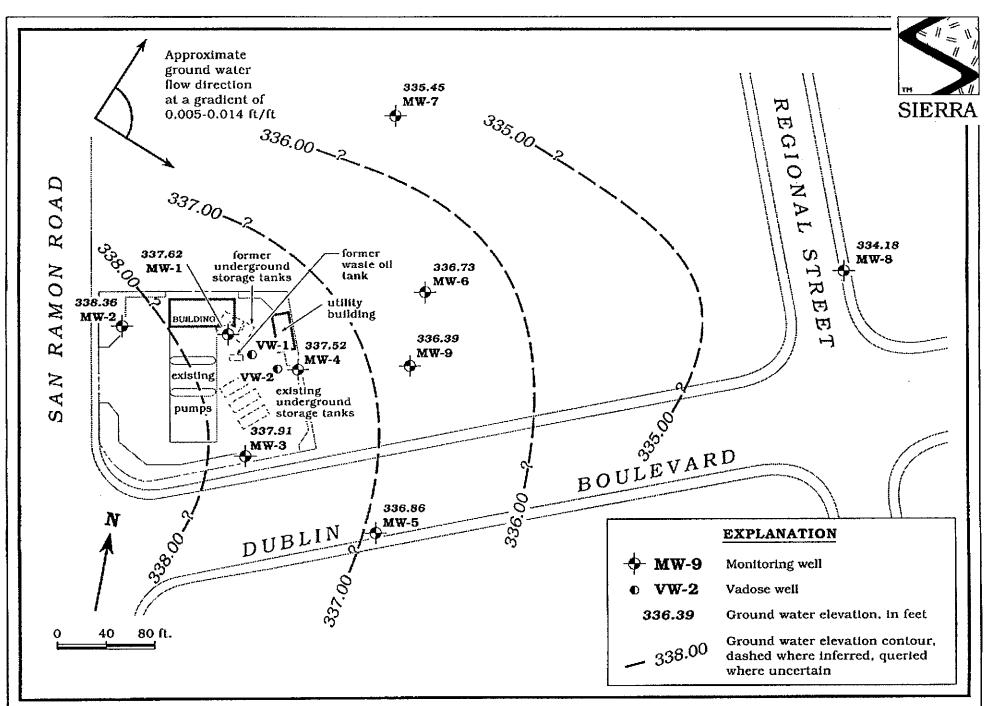
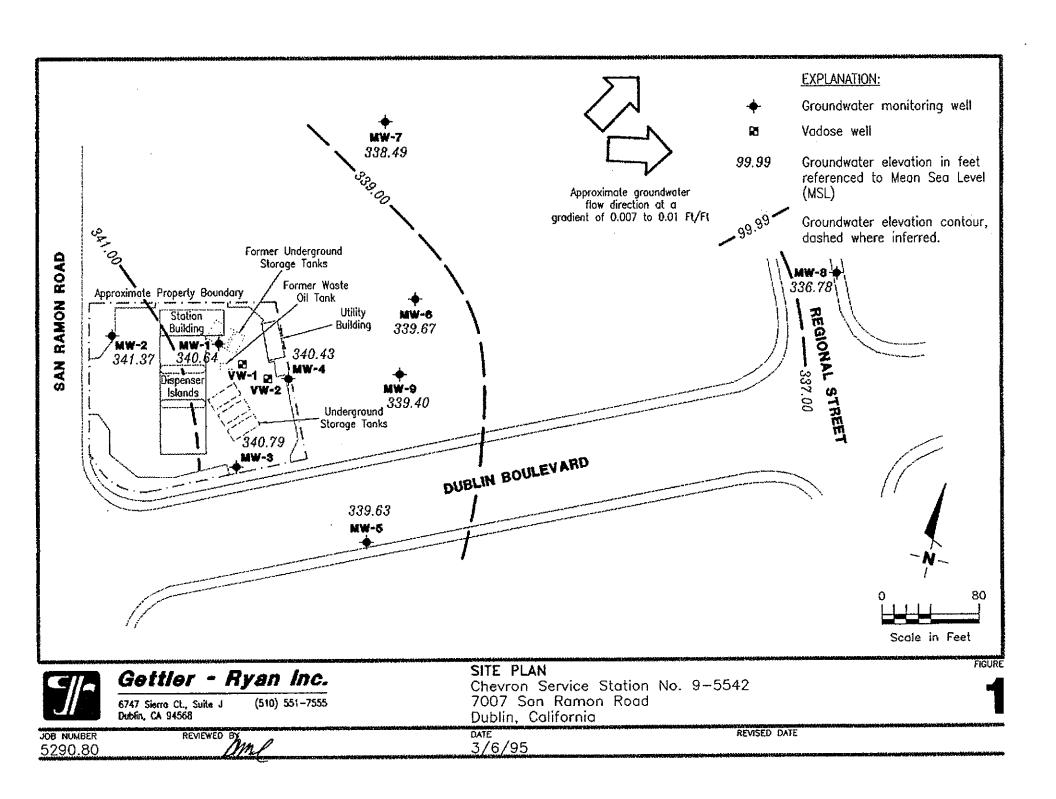
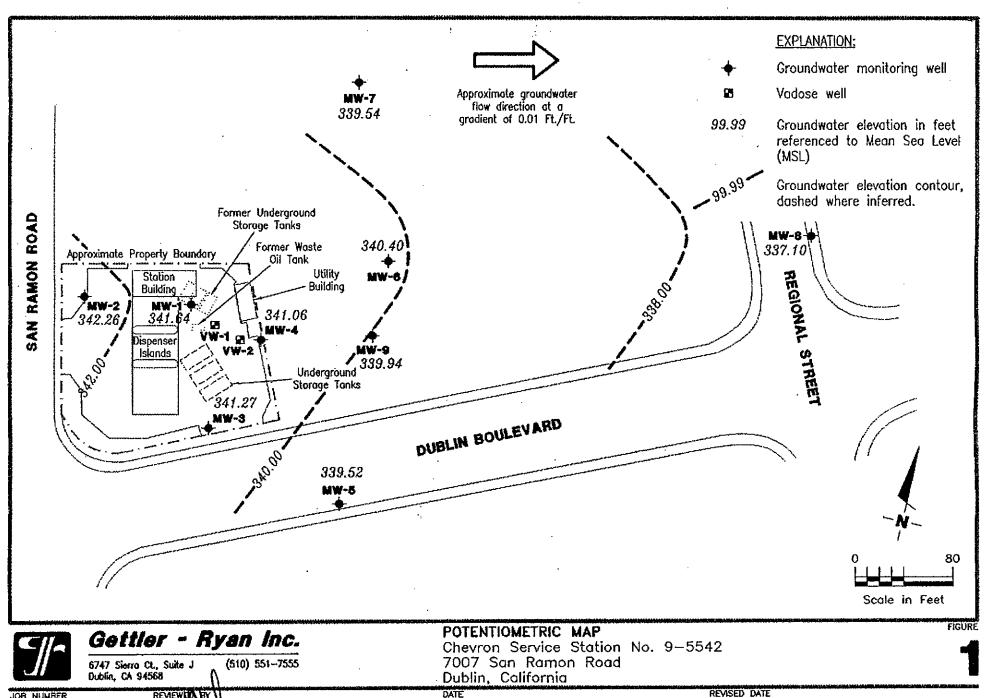


Figure 1. Monitoring Well Location and Ground Water Elevation Contour Map - December 8, 1994 - Chevron Service Station #9-5542, 7007 San Ramon Road, Dublin, California



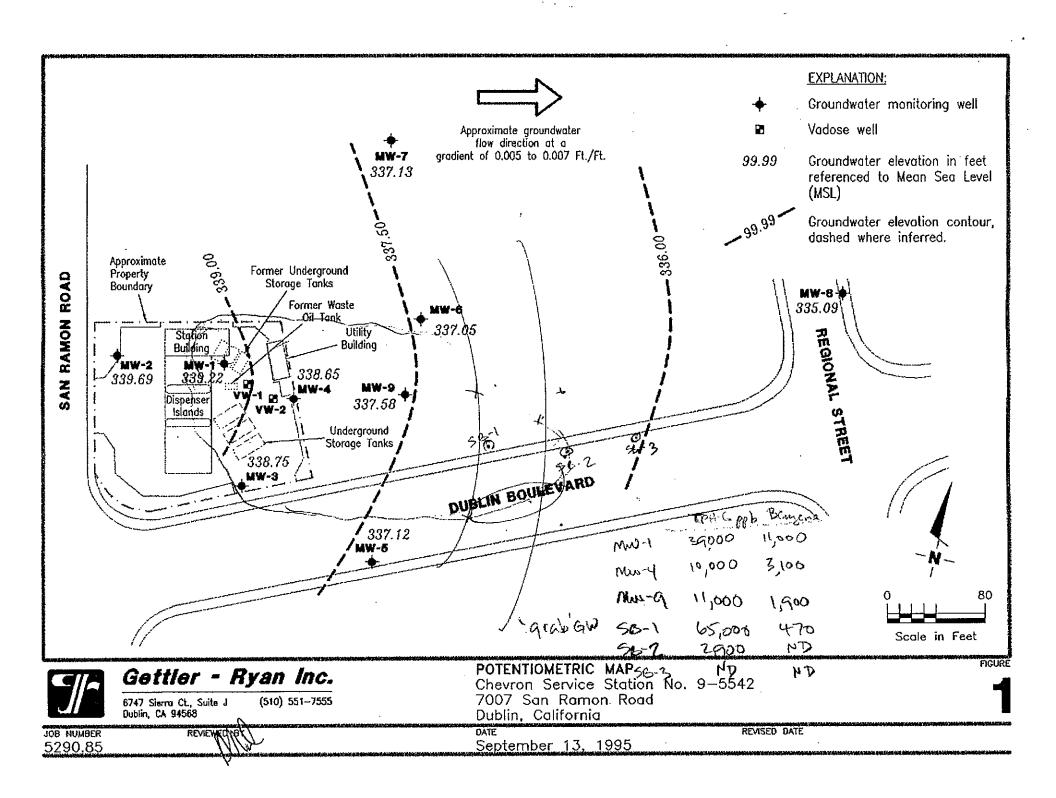


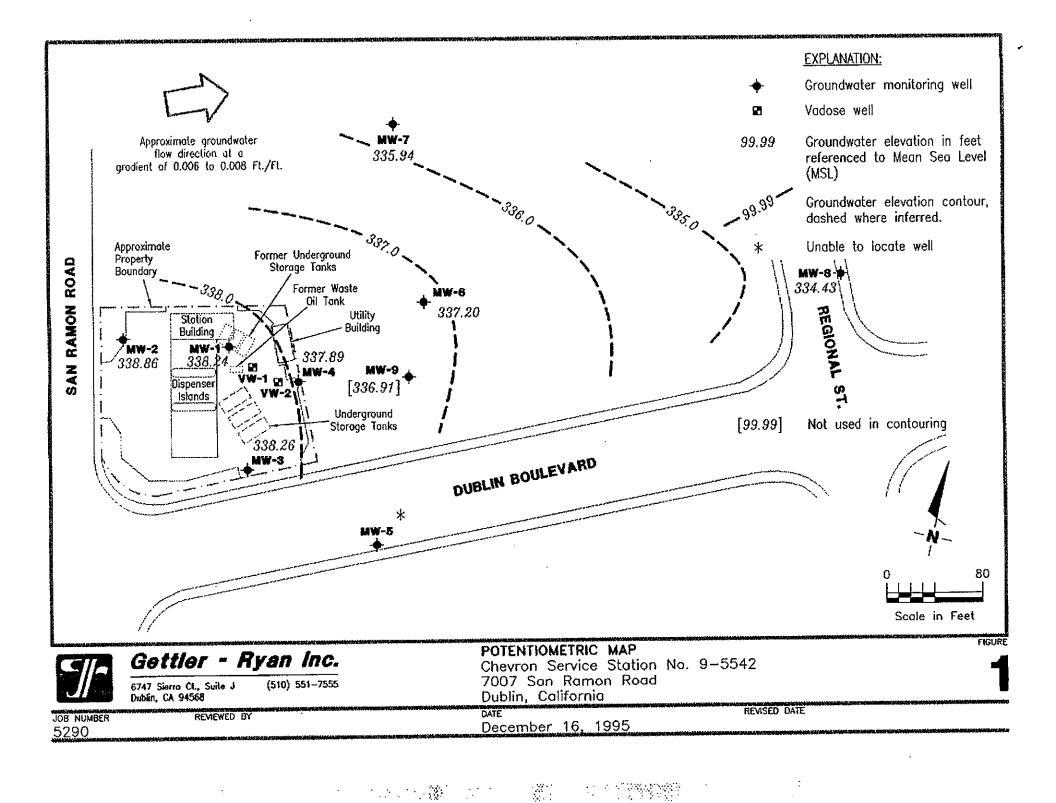
JOB NUMBER 5290.85

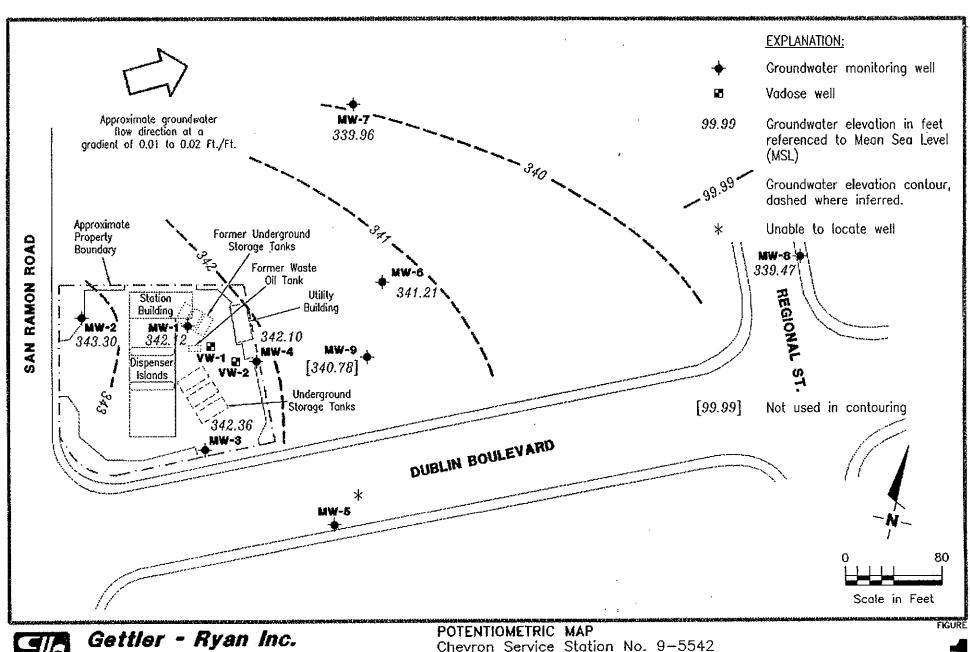
REVIEWED

June 8, 1995

REVISED DATE









REVIEWED BY

6747 Sierra Ct., Suite J Dublin, CA 94568

(510) 551-7555

7007 San Ramon Road

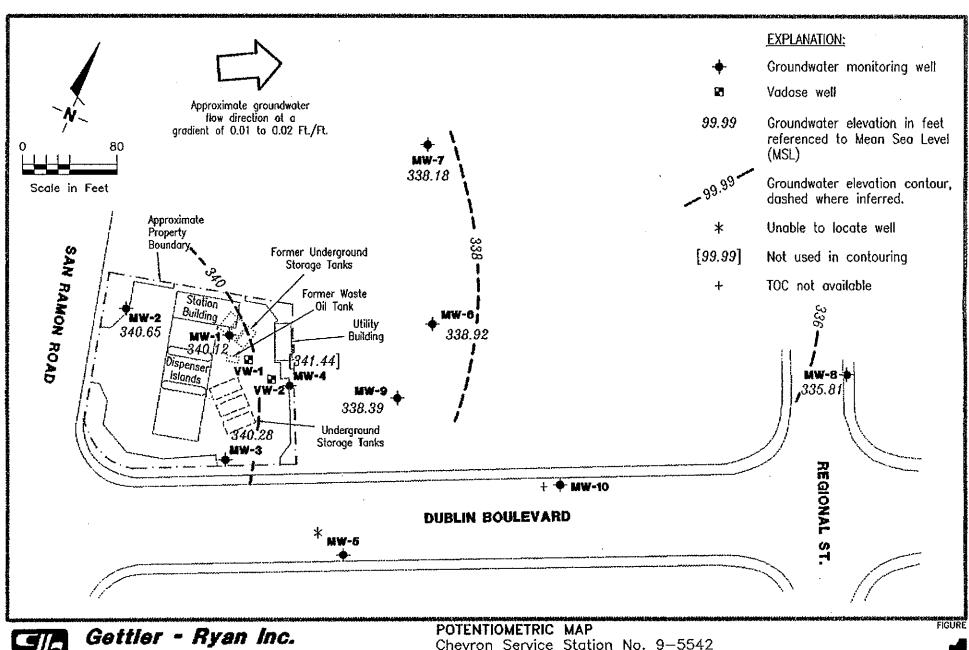
Dublin, California

DATE

March 28, 1996

REVISED DATE

JOB NUMBER 5290





Gettler - Ryan Inc.

REVIEWED BY

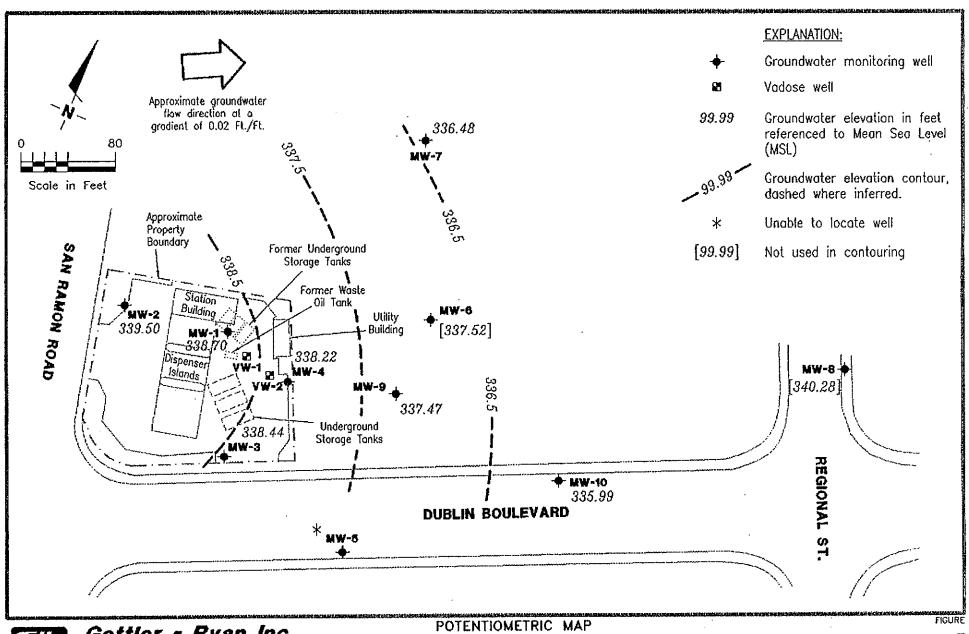
6747 Sierro Ct., Suite J Dublin, CA 94568

(510) 551-7555

7007 San Ramon Road Dublin, California

June 27, 1996

REVISED DATE





Gettler - Ryan Inc.

6747 Sierro Ct., Suite J Dublin, CA 94568

(510) 551-7555

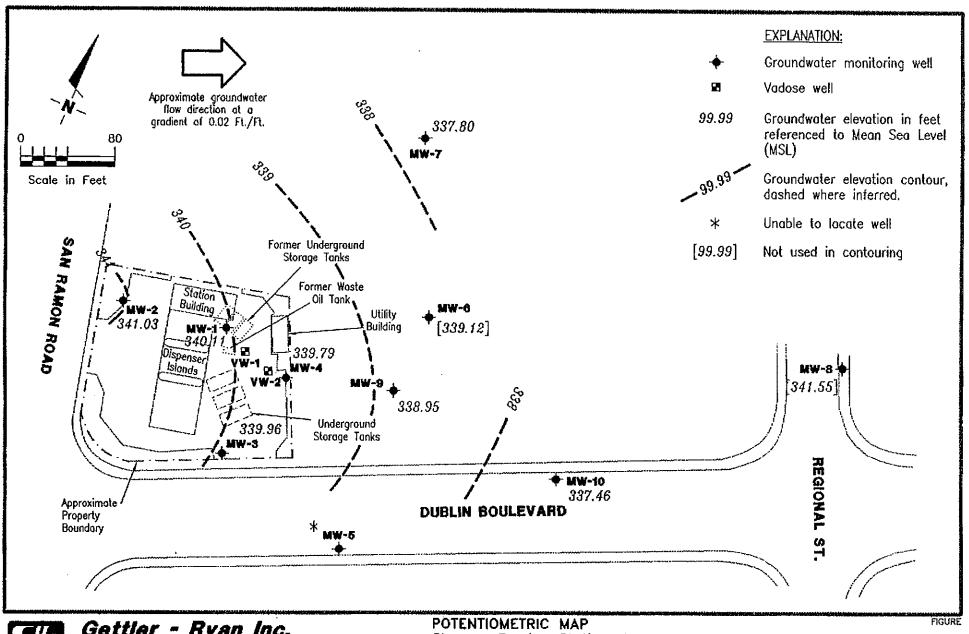
Chevron Service Station No. 9-5542 7007 San Ramon Road Dublin, California

DATE

September 30, 1996

REVISED DATE

JOB NUMBER 5290



.

Gettler - Ryan Inc.

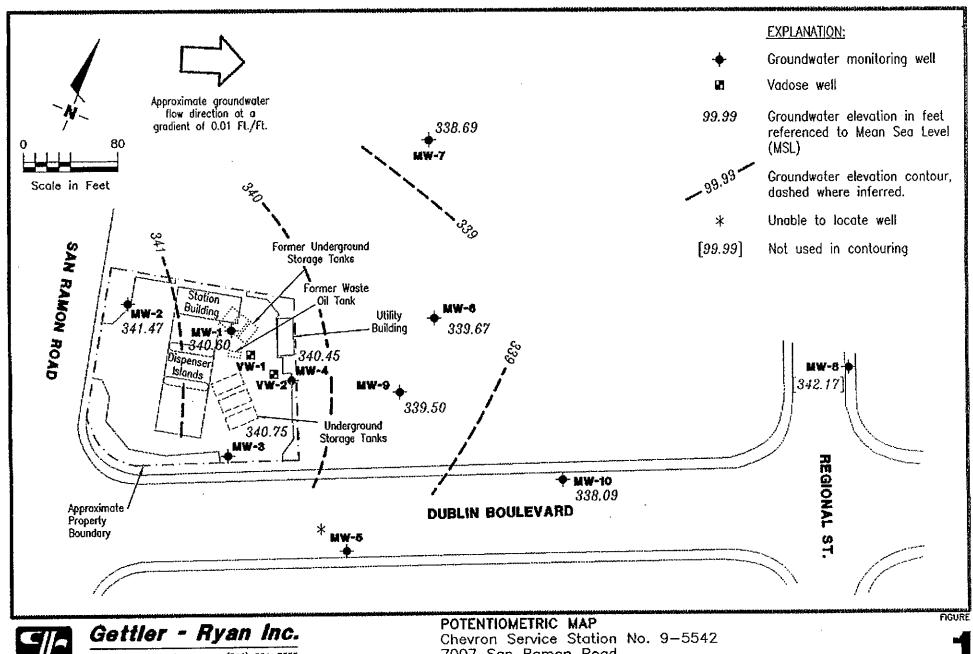
6747 Sierro Ct., Suite J Dublin, CA 94568 (510) 551-7555

Chevron Service Station No. 9-5542 7007 San Ramon Road Dublin, California

December 30, 1996

JOB NUMBER 5290

REVISED DATE





6747 Sierra CL, Suite J Dublin, CA 94568

REVIEWED BY

(510) 551-7555

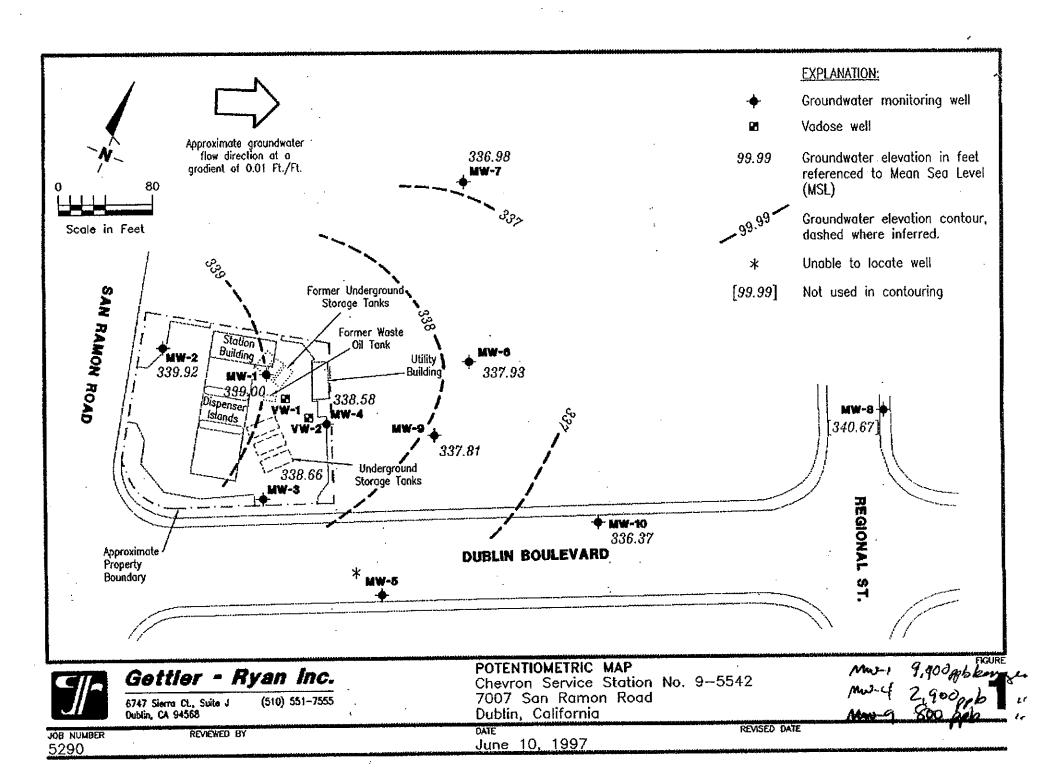
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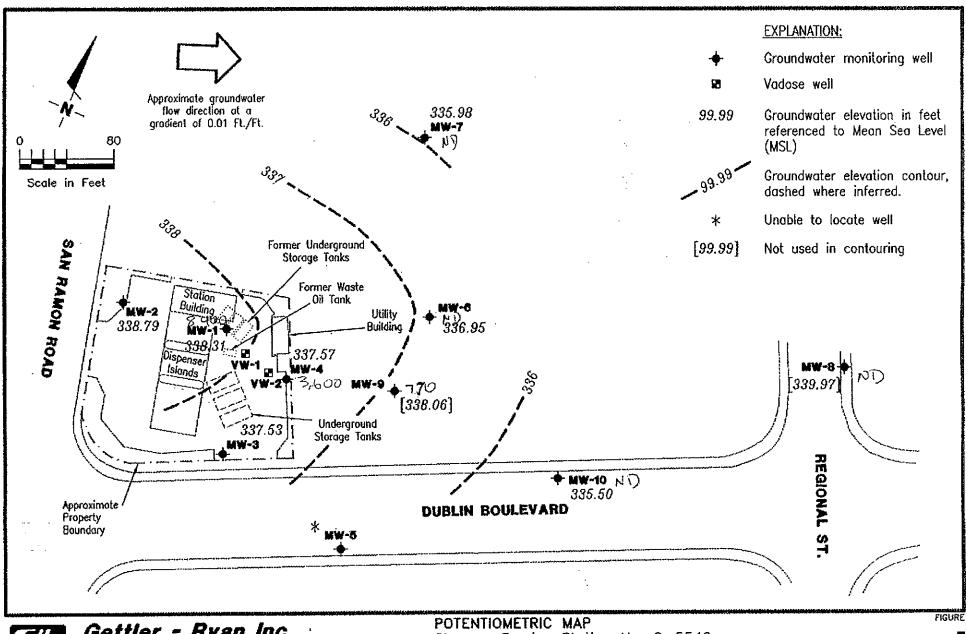
DATE

REVISED DATE

JOB NUMBER 5290

March 11, 1997







Gettler - Ryan Inc.

6747 Sierro CL, Suite J Dublin, CA 94568

(510) 551-7555

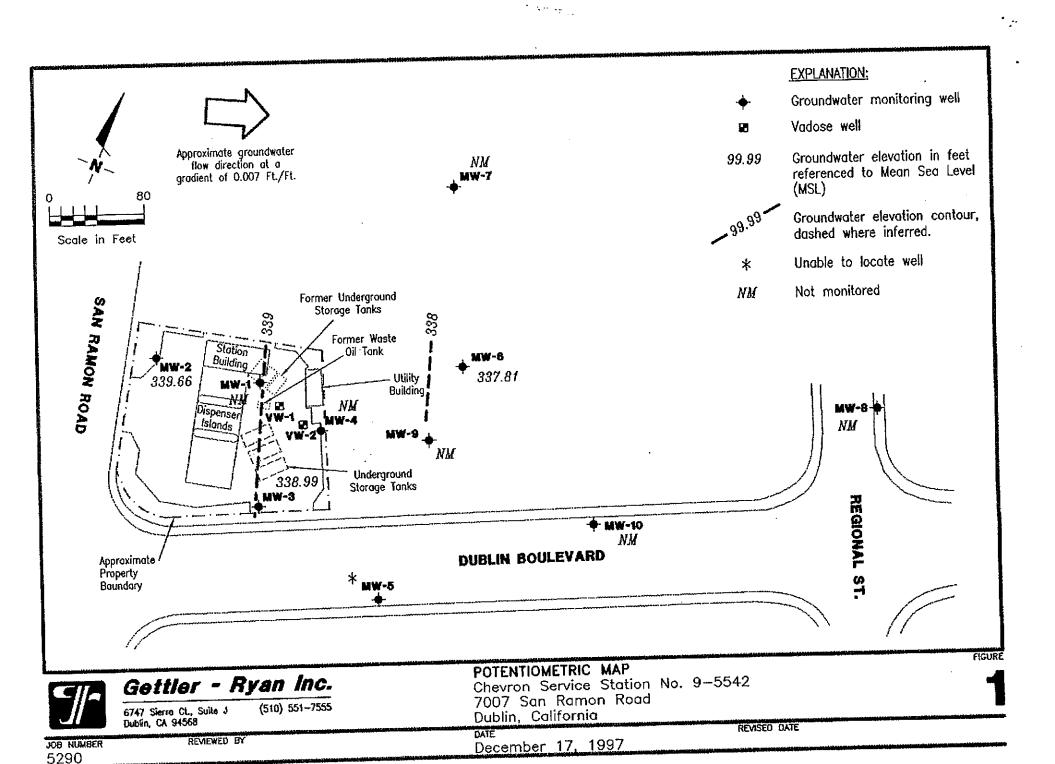
Chevron Service Station No. 9-5542 7007 San Ramon Road Dublin, California

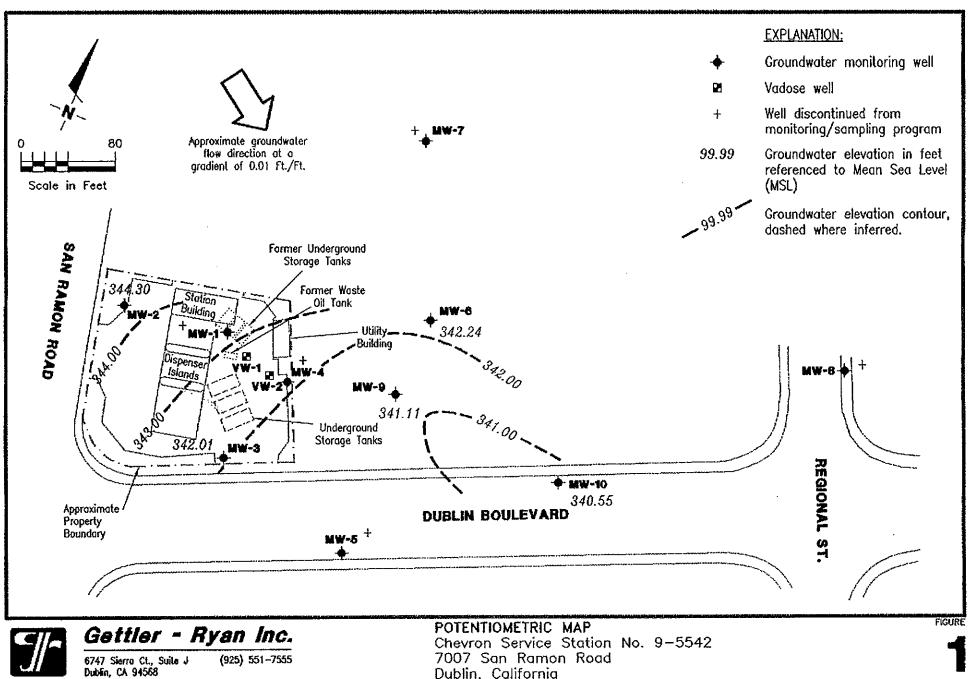
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REVISED DATE

JOB NUMBER REVIEWED BY 5290

October 1, 1997





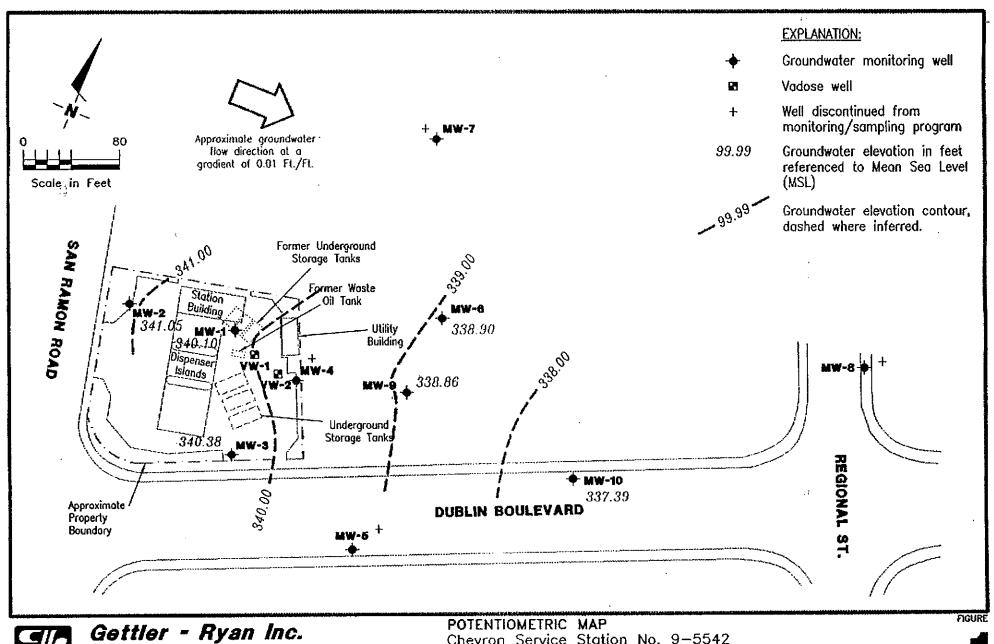
JOB NUMBER 5290

REVIEWED BY

7007 San Ramon Road

Dublin, California

DATE March 29, 1998 REVISED DATE



JOB NUMBER 5290

(925) 551-7555 6747 Sierra Ct., Suite J Dublin, CA 94568

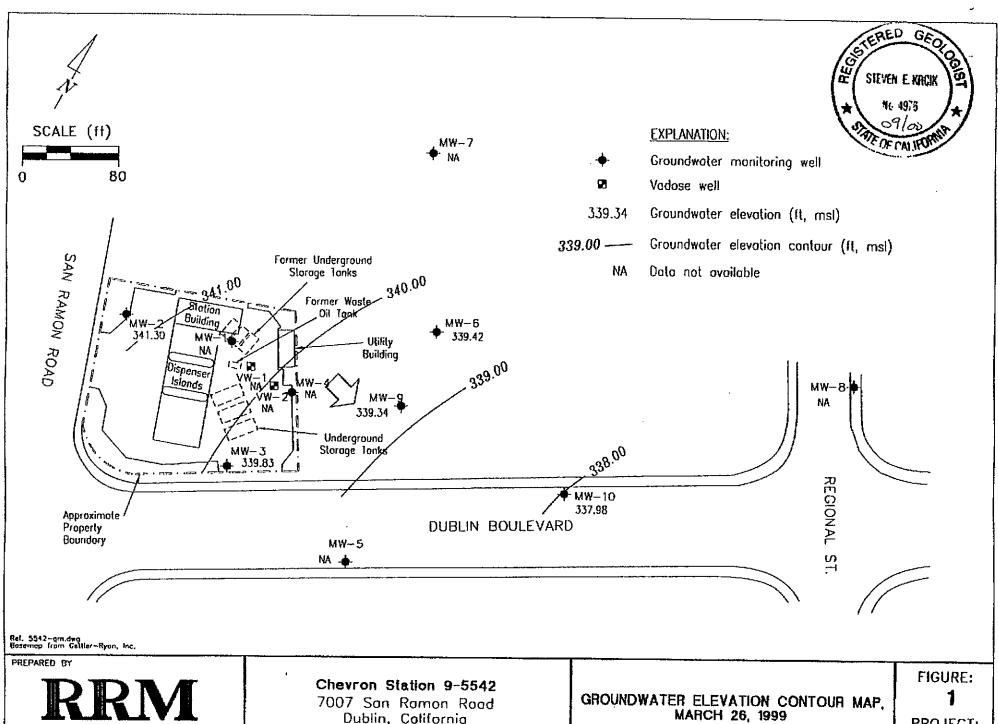
REVIEWED BY

Chevron Service Station No. 9-5542 7007 San Ramon Road Dublin, California

REVISED DATE

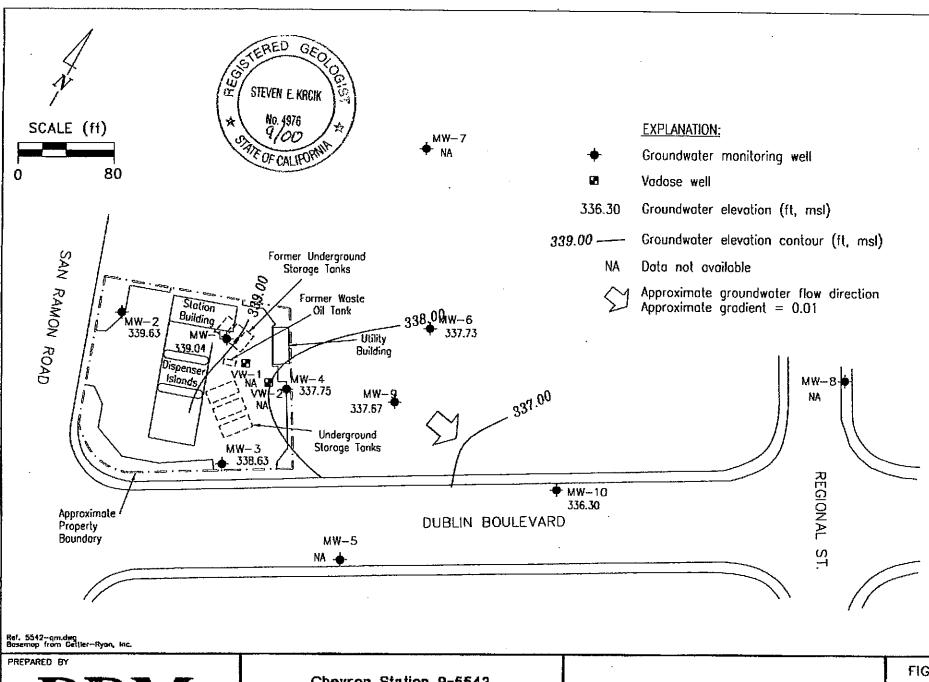
DATE

September 12, 1998



engineering contracting firm

PROJECT: DAC04



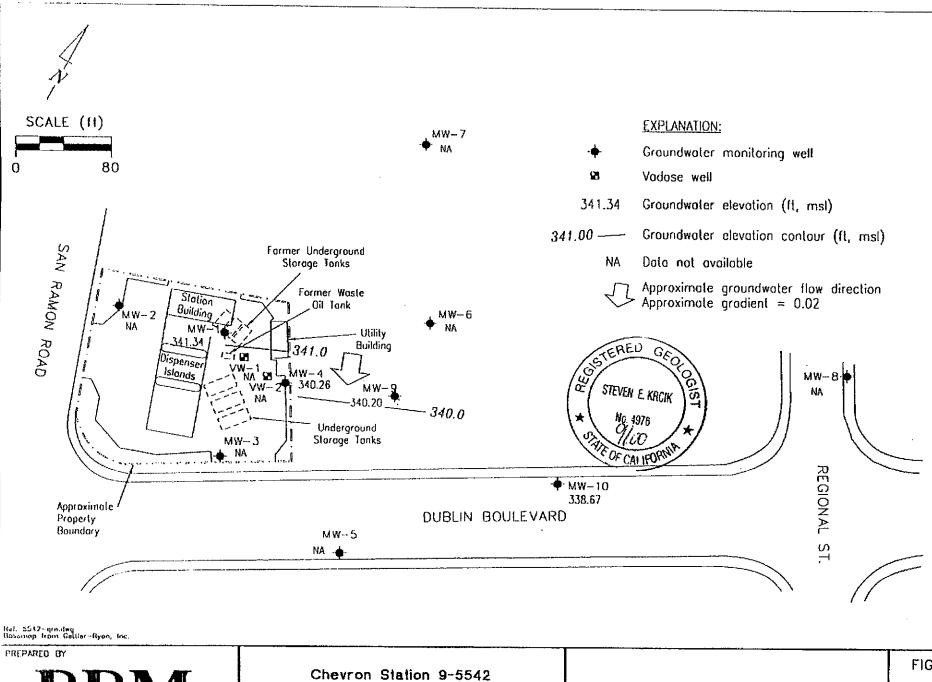
RRM engineering contracting firm

Chevron Station 9-5542 7007 San Ramon Road Dublin, California

GROUNDWATER ELEVATION CONTOUR MAP, SEPTEMBER 29, 1999

FIGURE:

PROJECT:

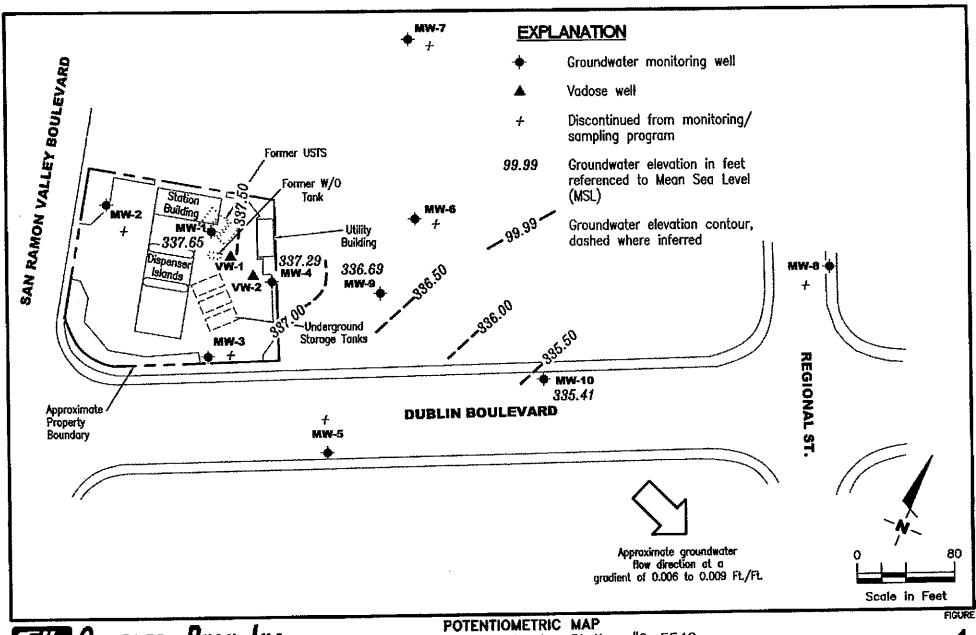


engineering contracting firm

7007 San Roman Road Dublin, California

GROUNDWATER ELEVATION CONTOUR MAP, MARCH 17, 2000

FIGURE: PROJECT: DAC04





Chevron Service Station #9-5542 7007 San Ramon Valley Boulevard

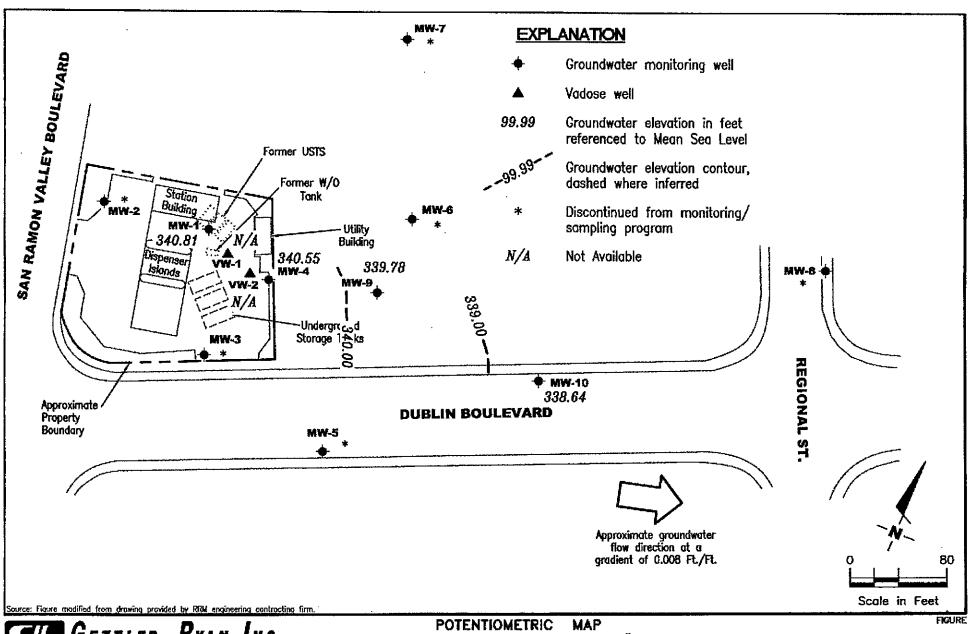
Dublin, California

DATE September 17, 2001 REVISED DATE

PROJECT NUMBER

385290
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REVIEWED BY



DATE

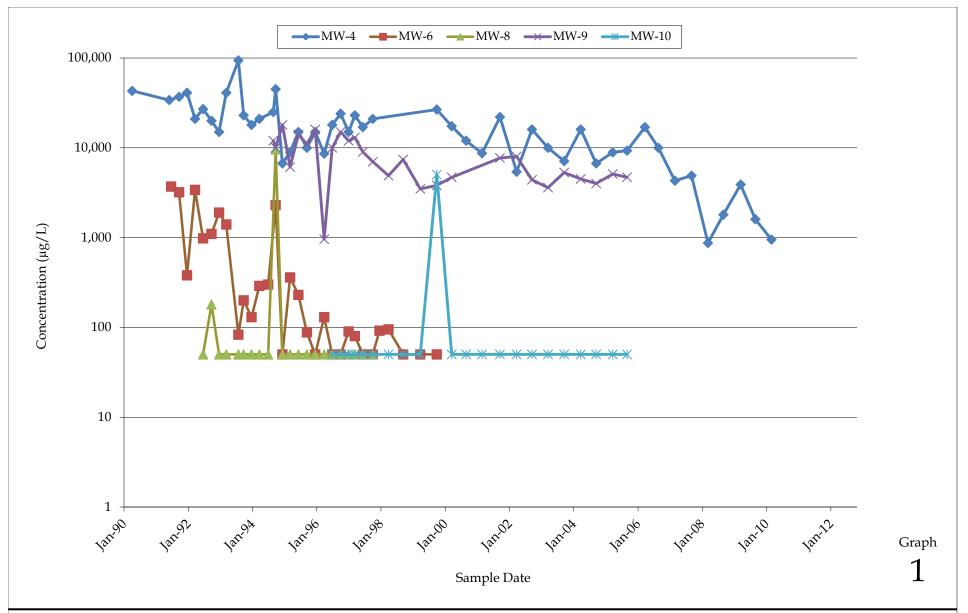
6747 Sierro Ct., (925) 551-7555 Chevron Service Station #9-5542 7007 San Ramon Valley Boulevard Dublin, California

REVISED DATE March 25, 2002

PROJECT NUMBER REVIEWED BY 385290

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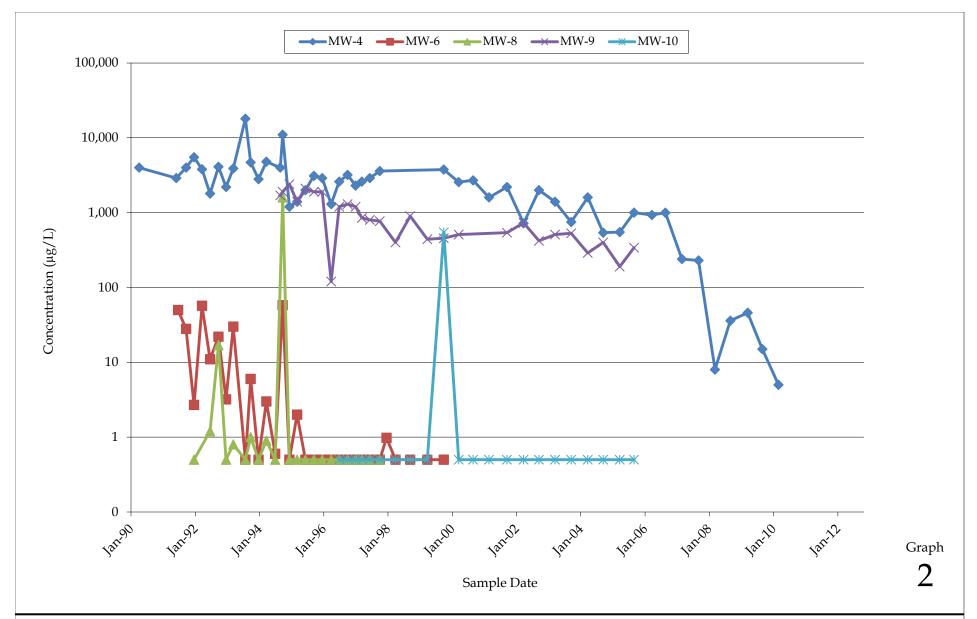
ATTACHMENT D HYDROCARBON VERSUS TIME GRAPHS



CHEVRON SERVICE STATION 95542 7007 SAN RAMON ROAD DUBLIN, CA



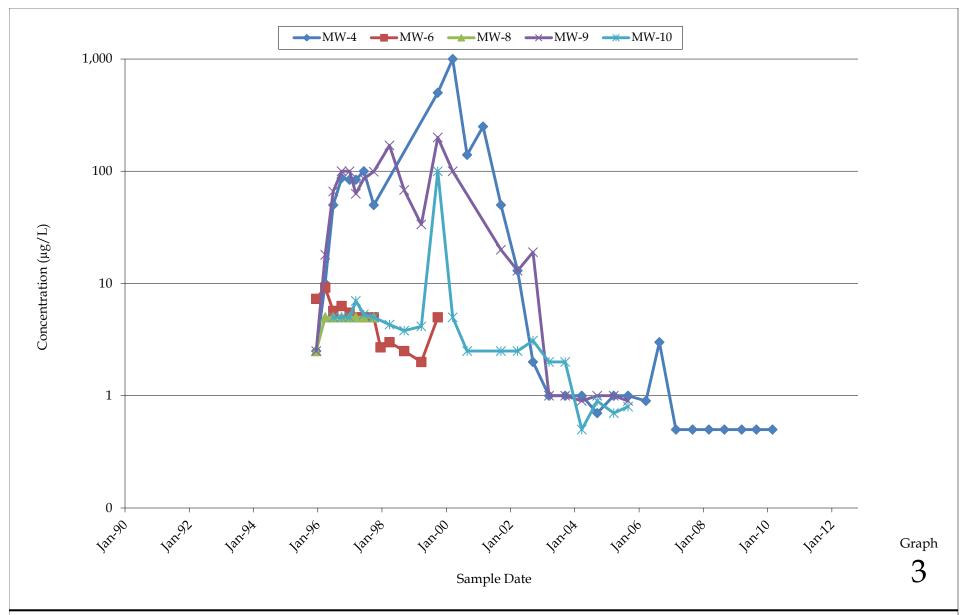
MONITORING WELLS MW-4, MW-6, MW-8, MW-9, AND MW-10 TPHg CONCENTRATIONS VERSUS TIME



CHEVRON SERVICE STATION 95542 7007 SAN RAMON ROAD DUBLIN, CA



MONITORING WELLS MW-4, MW-6, MW-8, MW-9, AND MW-10 BENZENE CONCENTRATIONS VERSUS TIME



CHEVRON SERVICE STATION 95542 7007 SAN RAMON ROAD DUBLIN, CA



MONITORING WELLS MW-4, MW-6, MW-8, MW-9, AND MW-10 MTBE CONCENTRATIONS VERSUS TIME

ATTACHMENT E LABORATORY REPORTS



Western Region 4080-C Pike Ln., Concord, CA 94520 (415) 685-7852 In CA: (800) 544-3422 Outside CA: (800) 423-7143 Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436
Report Issue Date: February 20, 1990

LOC
TABLE CONTRACTOR

T 0240

LUCIA CHOU CHEVRON U.S.A INC. P.O. BOX 5004 SAN RAMON, CA 94583

DEAR MS. CHOU:

Attached please find the analytical results for the samples received by GTEL on February 16, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,

GTEL Environmental Laboratories, Inc.

Emma P. Popek Laboratory Director

Table 1 ANALYTICAL RESULTS

Purgeable Hydrocarbons in Soil EPA Method 8240

	Date Sampled	02/13/90	02/13/90	
	Date Analyzed		02/16/90	
Client Identification		1322-7	1322-8	
GTEI	GTEL Sample Number		02	
Analyte	Detection Limit, ug/Kg	Concentration, ug/Kg		
Chloromethane	500	<500	<500	
Bromomethane	500	<500	<500	
Vinyl Chloride	500	<500	<500	
Chloroethane	500	<500	<500	
Methylene Chloride	250	<250	<250	
Acetone	5000	<5000	<5000	
Carbon Disulfide	250	<250	<250	
1,1-Dichloroethene	250	<250	<250	N. 1
1,1-Dichloroethane	250	<250	<250	
trans-1,2-Dichloroethene	250	<250	<250	
Chloroform	250	<250	<250	
1,2-Dichloroethane	250	<250	<250	
2-Butanone	5000	<5000	<5000	
1,1,1-Trichloroethane	250	<250	<250	
Carbon Tetrachloride	250	<250	<250	
Vinyl Acetate	2500	<2500	<2500	
Bromodichloromethane	250	<250	<250	
1,2-Dichloropropane	250	<250	<250	
cis-1,3-Dichloropropene	250	<250	<250	
Trichloroethene	250	<250	<250	
Dibromochloromethane	250	<250	<250	
1,1,2-Trichloroethane	250	<250	<250	
Benzene	250	<250	<250	
trans-1,3-Dichloropropene	250	<250	<250	
2-Chloroethylvinylether	500	<500	<500	

Table 1 continued on page 3



Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436
Report Issue Date: February 21, 1990

Table 1 con't ANALYTICAL RESULTS

Purgeable Hydrocarbons in Soil EPA Method 8240

	Date Sampled Date Analyzed Client Identification		02/13/90		
			02/16/90		
Client			1322-8		
GTEL	GTEL Sample Number		02		
Analyte	Detection Limit,ug/Kg		Concentration, ug/Kg		
Bromoform	250	<250	<250		
4-Methyl-2-Pentanone	2500	<2500	<2500		
2-Hexanone	2500	<2500	<2500		
Tetrachloroethene	250	<250	<250		
1,1,2,2-Tetrachloroethane	250	<250	<250		
Toluene	250	<250	<250		• •
Chlorobenzene	250	<250	<250		
Ethylbenzene	250	<250	<250		
Styrene	250	<250	<250		
1,2-Dichlorobenzene	250	<250	<250		
1,3-Dichlorobenzene	250	<250	<250		
1,4-Dichlorobenzene	250	<250	<250		
Xylene (total)	250	<250	<250		
Trichlorofluoromethane	250	<250	<250		1



Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1 Contract Number: N46CWC0244-9-x

Facility Number: NA6CWC0244-9-Facility Number: NONE GIVEN Work Order Number: D002436

Report Issue Date: February 20, 1990

QA Conformance Summary

Purgeable Hydrocarbons in Soil EPA Method 8240

1.0 Blanks

Four of 39 target compounds found in Reagent water blank and MeOH blank as shown in Tables 2 and 2a.

2.0 Independent QC Check Sample

The control limits were met for 8 of 8 QC check compounds in the aqueous QC check sample as shown in Table 3.

3.0 Surrogate Compound Recoveries

Recovery limits were met for all three surrogate compounds for all samples as shown in Tables 4a, 4b, and 4c.

4.0 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Accuracy and Precision

4.1 Accuracy:

Percent recovery limits were met for 10 of 10 compounds in the MS and MSD as shown in Table 5

4.2 Precision:

Relative Percent Difference (RPD) criteria were met for 5 of 5 compounds in the MS and MSD as shown in Table 5.

5.0 Sample Handling

- 5.1 Sample handling and holding time criteria were met for all samples.
- 5.2 There were no exceptional conditions requiring dilution of samples.



Project Number: SF8-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: 0002436
Report Issue Date: February 20, 1990

Table 2

REAGENT WATER BLANK DATA

Purgeable Hydrocarbons in Soil EPA Method 8240

Date of Analysis: 02/16/90

Analyte	Observed Result, ug/Kg	
Chloromethane	ND	
Bromomethane	ND	
Vinyl Chloride	DK	
Chloroethane	ND	
Methylene Chloride	ИD	
Acetone	ND	
Carbon Disulfide	ND	
1,1-Dichloroethene	ОМ	
1,1-Dichloroethane	NO	
trans-1,2-Dichloroethene	ND	
Chloroform	ND	
1,2-Dichloroethane	ОМ	
2-Butanone	ND	
1,1,1-Trichloroethane	ND	
Carbon Tetrachloride	ND	
Vinyl Acetate	ND	
Bromodichloromethane	ND	
1,2-Dichloropropane	ND	
cis-1,3-Dichloropropene	ND	
Trichloroethene	ND	
Dibromochloromethane	ND	
1,1,2-Trichloroethane	ND	
Benzene	ND	
trans-1,3-Dichloropropene	ND	
2-Chloroethylvinylether	ND	

Table 2 continued on page 6



Table 2 conit

REAGENT WATER BLANK DATA

Purgeable Hydrocarbons in Soil EPA Method 8240

Analyte	Observed Result, ug/Ks
Bromoform	ND
4-Methyl-2-Pentanone	ND
2-Hexanone	ND
Tetrachloroethene	ND
1,1,2,2-Tetrachloroethane	МО
Toluene	ND
Chlorobenzene	ND
Ethylbenzene	ND
Styrene	ND
1,2-Dichlorobenzene	NO
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Xylene (total)	DM
Trichlorofluoromethane	ND

ND = Not detected above the statistical detection limit.



Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436 Report Issue Date: February 20, 1990

Table 2a

REAGENT MEOH BLANK DATA

Purgeable Hydrocarbons in Soil EPA Method 8240

Date of Analysis: 02/16/90

Analyte	Observed Result, ug/Kg
Chloromethane	ND
Bromomethane	ND
Vinyl Chloride	ND
Chloroethane	ND
Methylene Chloride	ND
Acetone	600
Carbon Disulfide	ND
1,1-Dichloroethene	ND
1,1-Dichloroethane	ND
trans-1,2-Dichloroethene	ND
Chloroform	ND
1,2-Dichloroethane	ND
2-Butanone	ND
1,1,1-Trichloroethane	ND
Carbon Tetrachloride	DИ
Vinyl Acetate	ND
Bromodichloromethane	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
Trichloroethene	ND
Dibromochloromethane	ND
1,1,2-Trichloroethane	ND
Benzene	ND
trans-1,3-Dichloropropene	ND
2-Chloroethylvinylether	ND

Table 2a continued on page 8



Table 2a con't

REAGENT MECH BLANK DATA

Purgeable Hydrocarbons in Soil EPA Method 8240

Analyte	Observed Result, ug/Kg	
Вготобогт	ND	
4-Methyl-2-Pentanone	ND	
2-Hexanone	ND	
Tetrachloroethene	ND	
1,1,2,2-Tetrachloroethane	ND	
Toluene	165	
Chlorobenzene	ND	
Ethylbenzene	185	
Styrene	מא	
1,2-Dichlorobenzene	DIA	
1,3-Dichlorobenzene	ND	
1,4-Dichlorobenzene	ND	
Xylene (total)	815	
Trichlorofluoromethane	ND	

ND = Not detected above the statistical detection limit.



Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436

Report Issue Date: February 20, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Purgeable Hydrocarbons in Soil EPA Hethod 8240

Date of Analysis:

02/06/90

Analyte	Expected Result, ug/L	Observed Result, ug/L	Recovery, %	Acceptability Limits, %
Trichloroethylene	50	52	104	60-140
Carbon Tetrachloride	50	51	102	80-120
1,1,1-Trichloroethane	50	52	104	60-140
1,1,2-Trichloroethane	50	57	114	60-140
Vinyl Chloride	50	45	90	60-140
Benzene	50	52	104	60-140
1,1-Dichloroethylene	50	49	98	60-140
1,2-Dichlorobenzene	50	55_	110	60-140 -

Table 3a INDEPENDENT QC CHECK SAMPLE SOURCE

Purgeable Hydrocarbons in Soil EPA Method 8240

Analyte	Lot Number	Source
Trichloroethylene	LA19682	PURGEABLE A SUPELCO
Carbon Tetrachloride	LA19682	PURGEABLE A SUPELCO
1.1.1-Trichloroethane	LA18769	PURGEABLE B SUPELCO
1,1,2-Trichloroethane	LA18769	PURGEABLE B SUPELCO
Vinyl Chloride	LA20078	PURGEABLE C SUPELCO
Benzene	LA18769	PURGEABLE B SUPELCO
1,1-Dichloroethylene	LA19682	PURGEABLE A SUPELCO
1,2-Dichlorobenzene	LA19682	PURGEABLE A SUPELCO



Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1 Contract Number: N46CWC0244-9-X Facility Number: NONE GIVEN Work Order Number: D002436

Report Issue Date: February 21, 1990

Table 4a

SURROGATE COMPOUND RECOVERY

d8-Taluene

Purgeable Hydrocarbons in Soil EPA Method 8240

Recovery Acceptability Limits1:

81 - 117 %

			
GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recov- ery, %
Water Blank	50	50	100
MeOH Blank	50	50	100
01	50	50	100
02	50	50	100
MS	50	50	100
HSD /	50	51	102

MS

MSD

Matrix spike sample Matrix spike duplicate sample Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.



Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1 Contract Number: N46CWC0244-9-X

Facility Number: NONE GIVEN Work Order Number: D002436 Report Issue Date: February 20, 1990

Table 4b

SURROGATE COMPOUND RECOVERY

Bromofluorobenzene

Purgeable Hydrocarbons in Soil EPA Method 8240

Recovery Acceptability Limits1:

74 - 121 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	50	100
MeOH Blank	50	50	100
01	50	50	100
02	50	50	100
MS	50	50	100
MSD	50	51	102

MS

MSD

Matrix spike sample Matrix spike duplicate sample Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements. 1



Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1 Contract Number: M46CWC0244-9-X Facility Number: NONE GIVEN Work Order Number: D002436 Report Issue Date: February 21, 1990

Table 4c

SURROGATE COMPOUND RECOVERY

d4-1,2-Dichloroethane

Purgeable Hydrocarbons in Soil EPA Method 8240

Recovery Acceptability Limits1:

70 - 121 %

GTEL No.	Expected Result,	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	54	108
MeOH Blank	50	56	112
01	50	56	112
02	50	57	114
HS	50	57	114
MSD	50	56	112

MS

MSD =

Matrix spike sample Matrix spike duplicate sample Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1 Contract Number: N46CWC0244-9-X

Facility Number: NONE GIVEN Work Order Number: 0002436

Report Issue Date: February 20, 1990

Table 5

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) RECOVERY AND RELATIVE PERCENT DEVIATION (RPD) REPORT

Purgeable Hydrocarbons in Soil EPA Method 8240

02/16/90

Client ID:

1322-7

ug/Kg

Date of Analysis: Sample Spiked:

Units:

	Sample Result	Amount Added	_	
Analyte			MS Result	MSD Result
1,1-Dichloroethene	ND	2500	2050	2000
Trichloroethene	ND	2500	2000	2000
Benzene	ND	2500	1950	1950
Toluene	ND	2500	2000	2050
Chlorobenzene	ND	2500	2200	2200

Analyte	MS, % Recovery	MSD, % Recovery	RPD, %	Acceptability Limits 1	
				Maximum RPD, %	% Recovery
1,1-Dichloroethene	82	80	2	22	59-172
Trichloroethene	80	80	0	24	62-137
Benzene	78	78	0	21	66-142
Toluene	80	82	2	21	59-139
Chlorobenzene	88	88	0	21	60-133

Not Detected above the statistical detection limit

Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.





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

Lucia Chou Chevron U.S.A Inc. P.O. Box 5004 San Ramon, CA 94583

T 4270

Dear Ms. Chou,

Attached please find the analytical results for the samples received by GTEL on February 16, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,

GTEL Environmental Laboratories, Inc.

Emma P. Popek

Laboratory Director

Munica P. Millie

Table 1 ANALYTICAL RESULTS

Semi-Volatile Organics in Soil EPA Method 8270

GT	EL Sample Number	01	02			
Client Identification		1322-7	1322-8			
Date Sampled		02/13/90	02/13/90			
Date Extracted		02/20/90	02/20/90			
Date Analyzed		02/21/90	02/21/90			
Analyte	Detection Limit, ug/Kg	Concentration, ug/Kg				
Phenol	660	<660	<660			
bis(2-Chloroethyl) Ether	660	<660	<660			
2-Chlorophenol	660	<660	<660			
1,3-Dichlorobenzene	660	<660	<660			
1,4-Dichlorobenzene	660	<660	<660			
Benzyl Alcohol	1300	<1300	<1300			
1,2-Dichlorobenzene	660	<660	<660		1	
2-Hethylphenol	660	<660	<660			
bis(2-Chloroisopropyl) Ether	660	<660	<660		<u>i</u>	
4-Methylphenol	660	<660	<660			
N-Nitroso-di-n-propylamine	660	<660	<660		1	
Hexachloroethane	660	<660	<660			
Nitrobenzene	660	<660	<660			
Isophorone	660	<660	<660			
2-Nitrophenol	660	<660	<660			
2,4-Dimethylphenol	660	<660	<660			
Benzoic Acid	3300	<3300	<3300			
bis(2-Chlorethoxy)methane	. 660	<660	<660			
2,4-Dichlorophenol	660	<660	<660			
1,2,4-Trichlorobenzene	660	<660	<660			
Naphthalene	660	<660	<660			
4-Chloroanaline	660	<660	<660			
Hexachlorobutadiene	660	<660	<660			
4-Chloro-3-methylphenol	1300	<1300	<1300			
2-Methylnaphthalene	660	<660	<660			



Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CVC0244-9-X
Facility Number: None Given
Work Order Number: D002437
Report Issue Date: February 26, 1990

Table 1 (Continued) ANALYTICAL RESULTS

Semi-Volatile Organics in Soil EPA Method 8270

GT	EL Sample Number	01	02		
Client Identification		1322-7	1322-8		
Date Sampled		02/13/90	02/13/90_		
	Date Extracted	02/20/90	02/20/90		
	Date Analyzed	02/21/90	02/21/90		
Detection Limit, ug/Kg			Concentration, ug/Kg		
Hexachlorocyclopentadiene	660	<660	<660		
2,4,6-Trichlorophenol	660	<660	<660		
2,4,5-Trichlorophenol	660	<660	<660		
2-Chloronaphthalene	660	<660	<660		
2-Nitroanaliline	3300	<3300	<3300		
Dimethylphthalate	660	<660	<660		
Acenaphthylene	660	<660	<660		* *
3-Nitroanaline	3300	<3300	<3300		• "
Acenaphthene	660	<660	<660		
2,4-Dinitrophenol	3300	<3300	<3300		
4-Nitrophenol	3300	<3300	<3300	<u> </u>	
Dibenzofuran	660	<660	<660		
2,4-Dinitrotoluene	660	<660	<660		
2,6-Dinitrotoluene	660	<660	<660	<u> </u>	
Diethylphthalate	660	<660	<660		
4-Chlorophenyl-phenyl Ether	660	<660	<660		
fluorene	660	<660	<660		
4-Witroanaline	3300	<3300	<3300		
4,6-Dinitro-2-methylphenol	3300	<3300	<3300		
N-Nitrosodiphenylamine ¹	660	<660	<660		
4-Bromophenyl Ether	660	<660	<660		
Hexachlorobenzene	660	<660	<660		
Pentachlorophenol	3300	<3300	<3300		
Phenanthrene	660	<660	<660		
Anthracene	660	<660	<660		

^{1 =} Cannot be separated from diphenylamine.



Table 1 (Continued) ANALYTICAL RESULTS

Semi-Volatile Organics in Soil EPA Hethod 8270

GTEL Sample Number		01	02		
Client Identification		1322-7	1322-8		
	Date Sampled Date Extracted		02/13/90		
			02/20/90		
	Date Analyzed		02/21/90		
Detection Limit, ug/Kg			Concentration, ug/Kg		
Di-n-butylphthalate	660	<660	<660		
fluoranthene	660	<660	<660		
Pyrene	660	<660	<660		
Butylbenzylphthalate	660	<660	<660		
3,3'-Dichlorobenzidine	660	<660	<660		
Benzo (a) anthracene	660	<660	<660		
bis(2-Ethylhexyl)phthalate	660	<660	<660		
Chrysene	660	<660	<660		
Di-n-octylphthalate	660	<660	<660		
Benzo[b] fluoranthene	660	<660	<660		
Benzo [k] fluoranthene	660	<660	<660		
Benzo[a] pyrene	660	<660	<660		
Indeno[1,2,3-cd]pyrene	660	<660	<660		
Dibenz(a,h)anthracene	660	<660	<660		
Benzo[g,h,i]perylene	660	<660	<660		
Benzidine	3300	<3300	<3300		



QA Conformance Summary

Semi-Volatile Organics in Soil EPA Method 8270

1.0 Blanks

One of 66 target compounds found in Reagent blank as shown in Table 2.

2.0 <u>Surrogate Compound Recoveries</u>

Recovery limits were met for at least 5 of 6 surrogate compounds for all samples as shown in Tables 3a, 3b, 3c, 3d, 3e and 3f.

- 3.0 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Accuracy and Precision
 - 3.1 Accuracy:

Percent recovery limits were met for 16 of 22 compounds in the MS and MSD as shown in Table 4.

3.2 Precision:

Relative percent difference (RPD) criteria were met for 11 of 11 compounds in the MS and MSD as shown in Table 4.

- 4.0 Sample Handling
 - 4.1 Sample handling and holding time criteria were met for all samples.
 - 4.2 There were no exceptional conditions requiring dilution of samples.



Table 2

REAGENT BLANK DATA

Semi-Volatile Organics in Soil EPA Method 8270

Date of Analysis:

02/21/90

Analyte	Observed Result, ug/Kg	
Phenol	ND	
bis(2-Chloroethyl) Ether	ND	
2-Chlorophenol	ND	
1,3-Dichlorobenzene	ND	
1,4-Dichlorobenzene	ND	
Benzyl Alcohol	ND	
1,2-Dichlorobenzene	ND	
2-Methylphenol	ND	
bis(2-Chloroisopropyl) Ether	ND	
4-Methylphenol	ND	
N-Nitroso-di-n-propylamine	ND	
Hexachloroethane	ДИ	
Nitrobenzene	ND	
Isophorone	ND	
2-Nitrophenol	ND	
2,4-Dimethylphenol	ND	
Benzoic Acid	ND	
bis(2-Chlorethoxy)methane	ND	
2,4-Dichlorophenol	ND	
1,2,4-Trichlorobenzene	ND	
Naphthalene	ND	
4-Chloroanaline	ND	
Hexachlorobutadiene	ND	
4-Chloro-3-methylphenol	ND	
2-Methylnaphthalene	ND	

ND = Not detected above the statistical detection limit.



Table 2 (Continued) REAGENT BLANK DATA

Semi-Volatile Organics in Soil EPA Method 8270

Analyte	Observed Result, ug/Kg	
Hexachlorocyclopentadiene	ND	
2,4,6-Trichlorophenol	ND	
2,4,5-Trîchlorophenol	ДМ	
2-Chloronaphthalene	ND	
2-Nitroanaliline	HD	
Dimethylphthalate	ND	
Acenaphthylene	ND	
3-Nitroanaline	ND	
Acenaphthene	ND	
2,4-Dinitrophenol	ND	
4-Nitrophenol	ND	
Dibenzofuran	ND	
2,4-Dinitrotoluene	ND	
2,6-Dinitrotoluene	ДИ	
Diethylphthalate	ND	
4-Chiorophenyi-phenyl Ether	NO	
Fluorene	ND	
4-Nitroanaline	ND	
4,6-Dinitro-2-methylphenol	ND _	
N-Nitrosodiphenylamine	ND_	
4-Bromophenyl Ether	ND	
Hexachlorobenzene	ND	
Pentachlorophenol	ND	
Phenanthrene	ND	
Anthracene	ND	

ND = Not detected above the statistical detection limit.



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Table 2 (Continued) REAGENT BLANK DATA

Semi-Volatile Organics in Soil EPA Method 8270

Analyte Observed Result,		
Di-n-butylphthalate	4800	
Fluoranthene	ND	
Pyrene	HD	
Butylbenzylphthalate	ND	
3,31-Dichlorobenzidine	ND	
Benzo [a] anthracene	ND	
bis(2-Ethylhexyl)phthalate	ND	
Chrysene	ND	
Di-n-octylphthalate	ND	
Benzo (b) fluoranthene	ND	
Benzo [k] fluoranthene	HD	
Benzo[a] pyrene	ND	
Indeno[1,2,3-cd]pyrene	ND	
Dibenz [a,h] anthracene	ND	
Benzo[g,h,i]perylene	ND	
Benzidine	NO	

ND = Not detected above the statistical detection limit.



Report Issue Date: February 26, 1990

Table 3a

SURROGATE COMPOUND RECOVERY

d5-Nitrobenzene

Semi-Volatile Organics in Soil EPA Method 8270

Recovery Acceptability Limits1:

23 - 120 %

GTEL No.	Expected Result, ug/l	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	50	33	66
01	50	32	64
02	50	28	56
MS	50	36	72
MSD	50	37	74

MS

MSD

Matrix spike sample Matrix spike duplicate sample Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Report Issue Date: February 26, 1990

Table 3b

SURROGATE COMPOUND RECOVERY

2-Fluorobiphenyl

Semi-Volatile Organics in Soil EPA Method 8270

Recovery Acceptability Limits1:

30 - 115 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recov- ery, %
Blank	50	32	64
01	50	31	62
02	50	31	62
MS	50	34	68
MSD	50	35	70

MS

MSD =

Matrix spike sample Matrix spike duplicate sample Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements. =



Table 3c

SURROGATE COMPOUND RECOVERY

d14-Terphenyl

Semi-Volatile Organics in Soil EPA Method 8270

Recovery Acceptability Limits1:

18 - 137 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	50	35	70
01	50	33	67
02	50	34	69
MS	50	36	73
MSD	50	34	69

MS

MSD

Matrix spike sample Matrix spike duplicate sample Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1

Contract Number: N46CWC0244-9-X Facility Number: None Given Work Order Number: D002437

Report Issue Date: February 26, 1990

Table 3d

SURROGATE COMPOUND RECOVERY

d5-Phenol

Semi-Volatile Organics in Soil EPA Method 8270

Recovery Acceptability Limits1:

24 - 113 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	100	65	65
01	100	53	53
02	100	44	44
MS	100	78	78
MSD	100	82	82

Matrix spike sample MS

MSD =

Matrix spike duplicate sample
Acceptability limits are derived from USEPA Contract Laboratory
Program (CLP) requirements.

Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1 Contract Number: N46CWC0244-9-X Facility Number: None Given Work Order Number: D002437 Report Issue Date: February 26, 1990

Table 3e

SURROGATE COMPOUND RECOVERY

2-Fluorophenol

Semi-Volatile Organics in Soil EPA Method 8270

Recovery Acceptability Limits1: 25 - 121 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	100	35	35
61	100	24	24
02	100	20	24
MS	100	25	25
MSD	100	ND	ND

ND Not detected

MS Matrix spike sample

MSD =

Matrix spike duplicate sample Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Project Number: SFB-175-0204.72 Consultant Project Number: 900213K1

Contract Number: N46CWC0244-9-X Facility Number: None Given Work Order Number: D002437 Report Issue Date: February 26, 1990

Table 3f

SURROGATE COMPOUND RECOVERY

2,4,6-Tribromophenol

Semi-Volatile Organics in Soil EPA Method 8270

Recovery Acceptability Limits¹:

19 - 122 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recov- ery, %
Blank	100	70	70
01	100	58	58
02	100	55	55
MS	100	75	75
MSD	100	75	75

Matrix spike sample

MSD =

Matrix spike duplicate sample
Acceptability limits are derived from USEPA Contract Laboratory
Program (CLP) requirements.

Report Issue Date: February 26, 1990

Table 4

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) RECOVERY AND RELATIVE PERCENT DEVIATION (RPD) REPORT

Semi-Volatile Organics in Soil EPA Method 8270

Date of Analysis: Sample Spiked:

1322-7

02/21/90 01

Client ID: Units: ug/Kg

Analyte	Sample Result	Amount Added	MS Result	MSD Result
Phenot	ND	100	96	103
2-Chlorophenol	ND	100	92	98
4-Chloro-3-methylphenol	ND	100	87	92
4-Nitrophenol	HD	100	105	102
Pentachlorophenol	ND	100	182	192
1,4-Dichlorobenzene	ND	50	41	40
N-Nitroso-di-n-propylamine	ND	50	71	80
1,2,4-Trichlorobenzene	ND	50	39	38_
2,4-Dinitrotoluene	ND	50	37	38
Acenaphthene	ND	50	52	54
Pyrene	ND	50	51	50

Analyte	MS, % Recovery	MSD, % Recovery	RPD, %	Acceptability Limits ¹	
				Maximum RPD,%	% Recovery
Phenol	96	103	7	35	26- 90
2-Chlorophenol	92	98	6	50	25-102
4-Chloro-3-methylphenol	87	92	6	33	26-103
4-Nitrophenol	105	102	3	50	11-114
Pentachlorophenol	182	192	5	47	17-109
1,4-Dichlorobenzene	82	80	2	27	28-104
N-Nitroso-di-n-propylamine	142	160	11	38	41-126
1,2,4-Trichlorobenzene	78	76	3	23	38-107
2,4-Dinitrotoluene	74	76	3	47	28- 89
Acenaphthene	102	104	4	19	31-137
Pyrene	102	100	2	36	35-142

ND = Not Detected above the statistical detection limit 1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.



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		Dublin, CA					
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