WESTERN GEOLOGIC RESOURCES INC.

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27 November 1990

Mr. Robert Foss
Chevron USA
2410 Camino Ramon
San Ramon, California 94583-0804

Re: Quarterly Groundwater Monitoring
Sampled October 1990
Chevron Service Station #92582
7420 Dublin Boulevard
Dublin, California
WGR Project #1-124.06

Dear Mr. Foss:

This letter report presents the results of the quarterly groundwater monitoring performed in October 1990 by Western Geologic Resources, Inc. (WGR) at the subject site (Figure 1).

GROUNDWATER SAMPLING

On 24 October 1990, WGR staff measured depth to water and purged monitor wells EA-1 through EA-3 with dedicated sampling systems. At least three well-casing volumes of groundwater were evacuated from each monitor well prior to sampling. All groundwater samples were collected according to the WGR standard operating procedure for groundwater sampling included as Attachment A; field sampling and monitoring forms are included as Attachment B.

All purged water was temporarily stored on-site in 55-gallon drums pending analytic results. The groundwater samples and a laboratory-supplied travel blank, consisting of deionized water, were shipped under chain-of-custody to Superior Analytical Laboratory, Inc. of San Francisco, California.

GROUNDWATER FLOW

Figure 2 shows the potentiometric surface of shallow groundwater based on depth-to-water measurements taken on 24 October 1990. Groundwater-elevation data are presented in Table 1. Average groundwater flow direction for 24 October 1990 was to the northwest at an average gradient of 0.45%.

ANALYTIC RESULTS

Groundwater samples from monitor wells EA-1 through EA-3 were analyzed for total purgeable petroleum hydrocarbons (TPPH), and for benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Methods 8015 and 8020, respectively. Analytic results for past sampling events and this round of sampling are presented in Table 2. The chain-of-custody form and laboratory reports with quality assurance/quality control documents are included as Attachments C and D, respectively.

COMMENTS

The groundwater flow direction and gradient were similar to those reported during previous sampling events. Groundwater samples from monitor well EA-1 had detectable concentrations of TPPH and BTEX similar to the previous sampling. TPPH and BTEX concentrations were below the detection limits for samples from wells EA-2 and EA-3 during the October sampling, similar to previous results.

Western Geologic Resources, Inc. is pleased to provide geologic and environmental consulting services for Chevron and trusts that this report meets your needs. Please call us at (415) 457-7595 if you have any questions.

Sincerely,
Western Geologic Resources, Inc.

Randall D. Smith
Staff Geologist

Eric D. Stevenson
Senior Staff Engineer

RDS/EDS:va

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FIGURES

1. Site Location Map
2. Potentiometric Surface of Shallow Groundwater, 24 October 1990

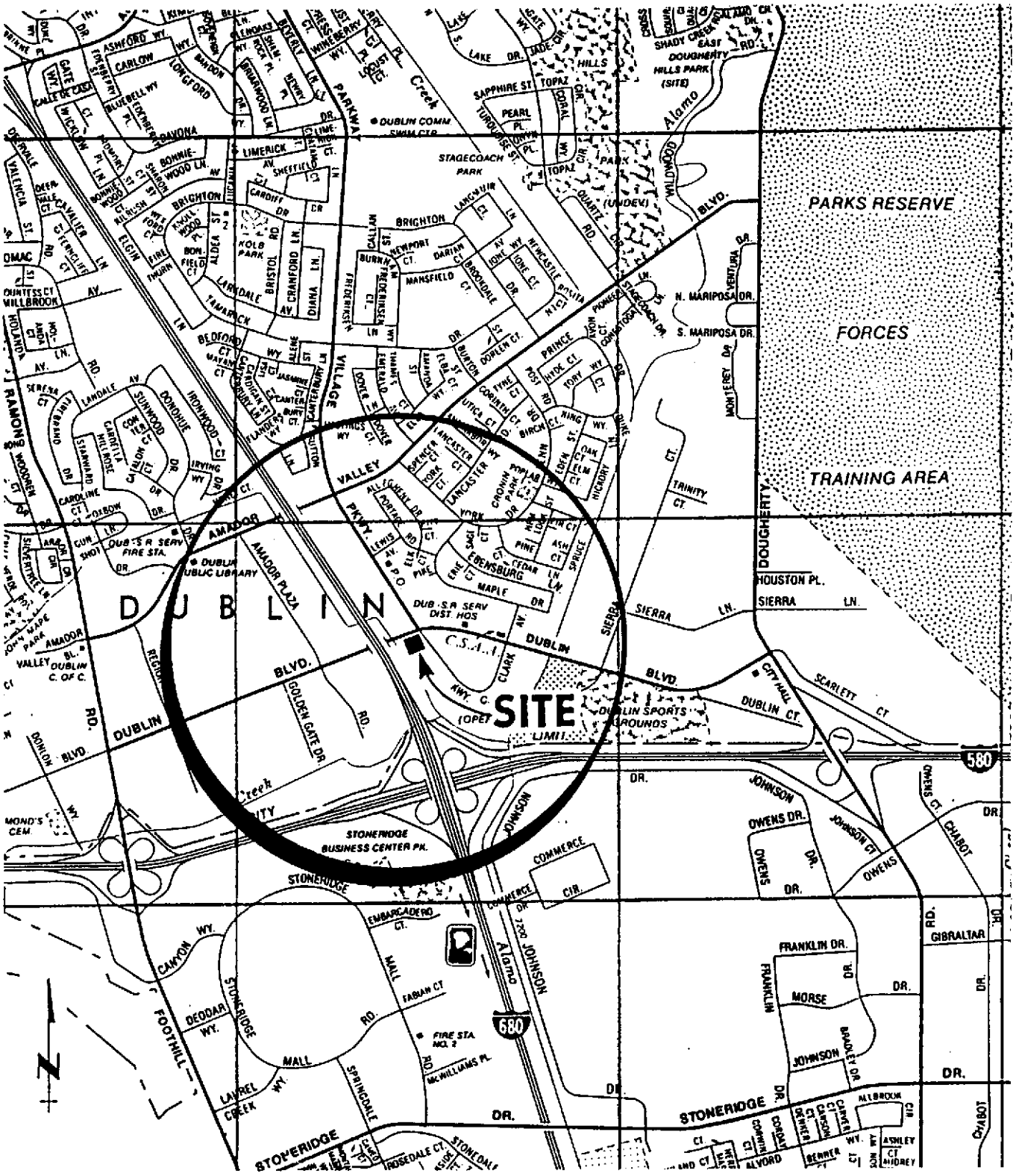
TABLES

1. Groundwater-Elevation Data
2. Analytic Results: Groundwater Samples

ATTACHMENTS

A. SOP-4: Groundwater Purging and Sampling
B. Field Sampling and Monitoring Forms
C. Chain-of-Custody Form
D. Laboratory Reports with Quality Assurance/Quality Control Documents

FIGURES

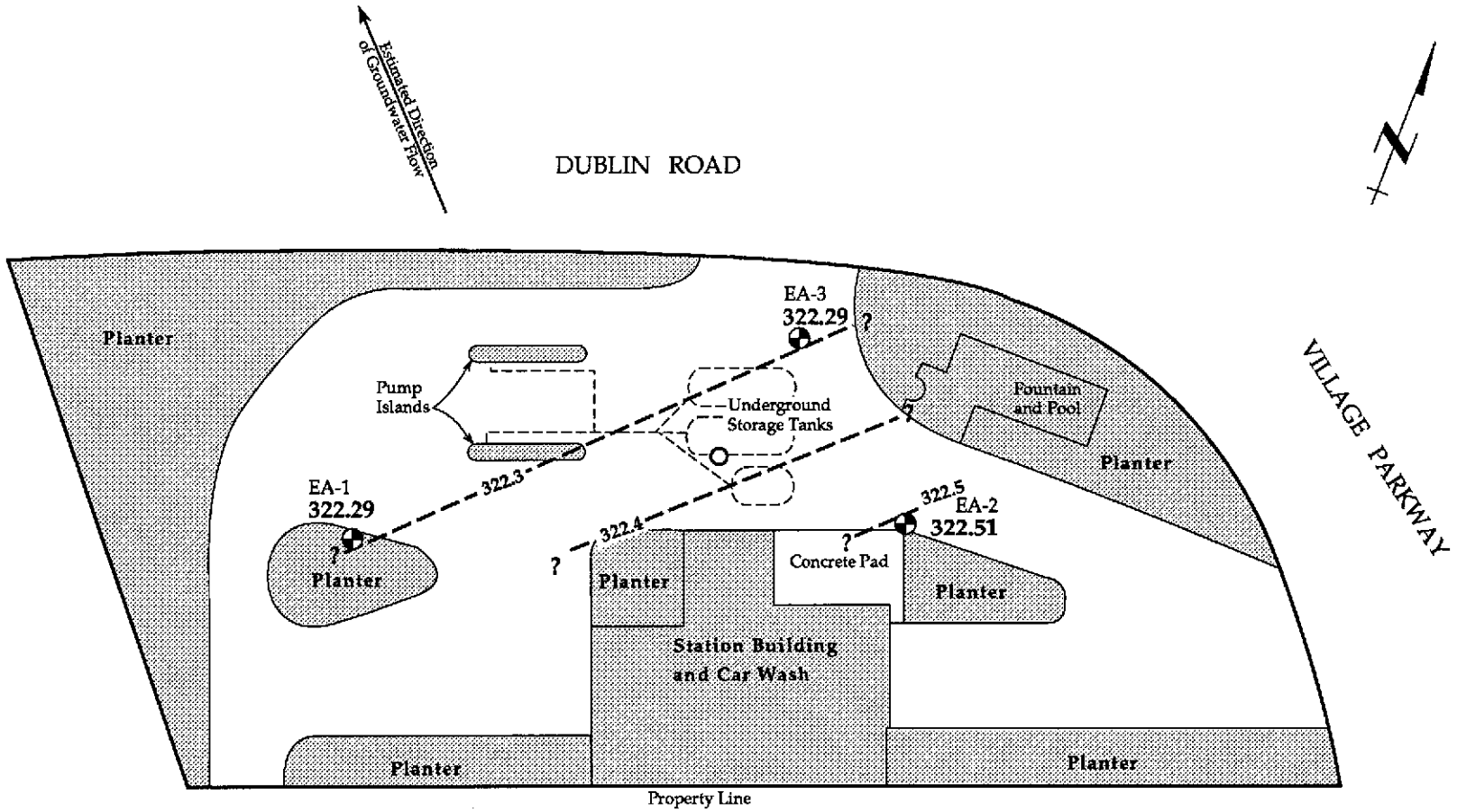


Site Location Map
Chevron Service Station #92582
Dublin, California

FIGURE
1

WESTERN GEOLOGIC RESOURCES, INC.

1-124.06



EXPLANATION

EA-1 322.29	Groundwater monitor well and groundwater elevation, feet above mean sea level
○	10" diameter PVC casing
322.3 — — — ?	Groundwater elevation contour, feet above mean sea level, dashed where inferred, queried where uncertain

Potentiometric Surface of Shallow Groundwater
24 October 1990
Chevron Service Station #92582
Dublin, California

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-124.06

TABLES

TABLE 1. Groundwater-Elevation Data
Chevron Service Station #92582
Dublin, California

Well ID #	Date	TOC	DTW	Elev-W
		<----------ft---------->		
EA-1	24 Oct 88 *	333.41	10.64	322.77
EA-1	2 Nov 88 *	333.41	10.69	322.72
EA-1	20 Dec 88 *	333.41	10.51	322.90
EA-1	28 Mar 89 *	333.41	9.87	323.54
EA-1	2 Aug 89	333.41	10.34	323.07
EA-1	6 Nov 89	333.41	10.65	322.76
EA-1	25 Jan 90	333.41	10.60	322.81
EA-1	23 Apr 90	333.41	10.58	322.83
EA-1	1 Aug 90	333.41	10.88	322.53
EA-1	24 Oct 90	333.41	11.12	322.29
EA-2	24 Oct 88 *	332.59	9.70	322.89
EA-2	2 Nov 88 *	332.59	10.03	322.56
EA-2	20 Dec 88 *	332.59	9.98	322.61
EA-2	28 Mar 89 *	332.59	8.80	323.79
EA-2	2 Aug 89	332.59	9.44	323.15
EA-2	6 Nov 89	332.59	9.53	323.06
EA-2	25 Jan 90	332.59	9.27	323.32
EA-2	23 Apr 90	332.59	9.35	323.24
EA-2	1 Aug 90	332.59	9.71	322.88
EA-2	24 Oct 90	332.59	10.08	322.51
EA-3	24 Oct 88 *	333.64	11.03	322.61
EA-3	2 Nov 88 *	333.64	11.03	322.61
EA-3	20 Dec 88 *	333.64	10.96	322.68
EA-3	28 Mar 89 *	333.64	9.77	322.87
EA-3	2 Aug 89	333.64	10.65	322.99
EA-3	6 Nov 89	333.64	10.78	322.86
EA-3	25 Jan 90	333.64	10.66	322.98
EA-3	23 Apr 90	333.64	10.68	322.96
EA-3	1 Aug 90	333.64	11.03	322.61
EA-3	24 Oct 90	333.64	11.35	322.29
PVC	2 Aug 89	---	9.83	---
PVC	6 Nov 89	---	---	---
PVC	25 Jan 90	---	---	---
PVC	23 Apr 90	---	---	---
PVC	1 Aug 90	---	---	---
PVC	24 Oct 90	---	---	---

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TABLE 1. Groundwater-Elevation Data (continued)
Chevron Service Station #92582
Dublin, California

NOTES:

TOC	= Top-of-Casing Elevation
DTW	= Depth to Water
Elev-W	= Elevation of Water
ft	= feet
PVC	= 10" PVC Casing
*	= Data obtained by EA Engineering, Science and Technology, Inc.
---	= Not Measured

TABLE 2. Analytic Results: Groundwater Samples
Chevron Station #92582
Dublin, California

Well ID #	Date	Lab	EPA Method	TPPH/TPH	B	T	E	X	1,2-DCA
				<----------ppb---------->					
EA-1	17 Oct 88 *	NA	NA	<50.0	<0.5	<0.5	<0.5	<0.5	---
EA-1	20 Dec 88 *	PACE	8015/8020	<50.0	<0.5	<0.5	<0.5	<0.5	---
EA-1	28 Mar 89 *	PACE	8015/8020	<250	<0.5	<0.5	<0.5	<0.5	---
EA-1	2 Aug 89	CCAS	8260	<50.0	<0.1	<0.1	<0.1	<0.1	<0.1
EA-1	6 Nov 89	SAL	8015/8240	<500	<3.0	<5.0	<5.0	<5.0	<5.0
EA-1	25 Jan 90	SAL	8015/8020/8010	<50	<0.5	<0.5	<0.5	<0.5	<0.5
EA-1	23 Apr 90	SAL	8015/8020/8010	71	2	5	3	8	<0.5
EA-1	1 Aug 90	SAL	8015/8020	300	86	21	10	33	---
EA-1	24 Oct 90	SAL	8015/8020	280	69	13	11	16	---
EA-2	17 Oct 88 *	NA	NA	<50.0	<0.5	<0.5	<0.5	1.2	---
EA-2	20 Dec 88 *	PACE	8015/8020	<50.0	<0.5	<0.5	<0.5	<0.5	---
EA-2	28 Mar 89 *	PACE	8015/8020	<250	<2.0	<0.5	<0.5	<0.5	---
EA-2	2 Aug 89	CCAS	8260	<50.0	<0.1	<0.1	<0.1	<0.1	<0.1
EA-2	6 Nov 89	SAL	8015/8240	<500	<3.0	<5.0	<5.0	<5.0	<5.0
EA-2	25 Jan 90	SAL	8015/8020/8010	<50	<0.5	<0.5	<0.5	<0.5	<0.5
EA-2	23 Apr 90	SAL	8015/8020/8010	50	0.6	0.8	<0.5	2	<0.5
EA-2	1 Aug 90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
EA-2	24 Oct 90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
EA-3	17 Oct 88 *	NA	NA	<50.0	1.8	<0.5	<0.5	3.0	---
EA-3	20 Dec 88 *	PACE	8015/8020	240	90.0	1.2	13.0	3.3	---
EA-3	28 Mar 89 *	PACE	8015/8020	2,300	380.0	130.0	240.0	910.0	---
EA-3	2 Aug 89	CCAS	8260	<50.0	<0.1	<0.1	<0.1	<0.1	<0.1
EA-3	6 Nov 89	SAL	8015/8240	<500	<3.0	<5.0	<5.0	<5.0	<5.0
EA-3	25 Jan 90	SAL	8015/8020/8010	<50	<0.5	<0.5	<0.5	<0.5	<0.5
EA-3	23 Apr 90	SAL	8015/8020/8010	<50	0.8	<0.5	0.9	<0.5	<0.5
EA-3	1 Aug 90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
EA-3	24 Oct 90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---

TABLE 2. Analytic Results: Groundwater Samples (continued)
Chevron Station #92582
Dublin, California

Well ID #	Date	Lab	EPA Method	TPPH/TPH	B	T	E	X	1,2-DCA
				<----------ppb---------->					
PVC	2 Aug 89	CCAS	8260	100,000	8,700	14,000	1,700	17,000	50
PVC-D	2 Aug 89	CCAS	8260	110,000	9,200	14,000	1,800	13,000	50
PVC	6 Nov 89	---	---	---	---	---	---	---	---
PVC	25 Jan 90	---	---	---	---	---	---	---	---
PVC	23 Apr 90	---	---	---	---	---	---	---	---
PVC	1 Aug 90	---	---	---	---	---	---	---	---
PVC	24 Oct 90	---	---	---	---	---	---	---	---
EB	28 Mar 89 *	PACE	8015/8020	<250.0	<0.5	<0.5	<0.5	<0.5	---
TB	28 Jul 89	CCAS	8260	<50.0	<0.1	<0.1	<0.1	<0.1	<0.1
TB	6 Nov 89	SAL	8015/8240	<500	<3.0	<5.0	<5.0	<5.0	<5.0
TB	25 Jan 90	SAL	8015/8020/8010	<50	<0.5	<0.5	<0.5	<0.5	NA
TB	23 Apr 90	SAL	8015/8020/8010	<50	<0.5	<0.5	<0.5	<0.5	<0.5
TB	1 Aug 90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
TB	24 Oct 90	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---

NOTES:

TPPH = Total Purgeable Petroleum Hydrocarbons as gasoline
TPH = Total Petroleum Hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
1,2-DCA = 1,2-Dichloroethane
ppb = parts-per-billion
D = Duplicate analysis
PVC = 10" PVC casing
EB = Equipment Blank
TB = Travel Blank
* = Sample collected by EA Engineering, Science and Technology, Inc.
NA = Not Available
--- = Not analyzed/Not Applicable
< = Less than the detection limit
Gas = Gasoline
PACE = Pace Laboratories, Inc.
CCAS = Central Coast Analytical Services
SAL = Superior Analytical Laboratories, Inc.

ATTACHMENT A

SOP-4: GROUNDWATER PURGING AND SAMPLING

STANDARD OPERATING PROCEDURES
RE: GROUNDWATER PURGING AND SAMPLING
SOP-4

Prior to water sampling, each well is purged by evacuating a minimum of three well-casing volumes of groundwater or until the discharge water temperature, conductivity, and pH stabilize. The groundwater sample should be taken when the water level in the well recovers to 80% of its static level.

The sampling equipment used consists of either a teflon bailer or a stainless steel bladder pump with a teflon bladder. If the sampling system is dedicated to the well, then the bailer is made of teflon, but the bladder pump is PVC with a polypropylene bladder. Forty milliliter (ml) glass volatile-organic-analysis (VOA) vials, with teflon septa, are used as sample containers.

The groundwater sample is decanted into each VOA vial in such a manner that there is a meniscus at the top of the vial. The cap is quickly placed over the top of the vial and securely tightened. The VOA vial is then inverted and tapped to see if air bubbles are present. If none are present, the sample is labeled and refrigerated for delivery under chain-of-custody to the laboratory. Label information should include a sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name.

For quality control purposes, a duplicate water sample is collected from each well. This sample is put on hold at the laboratory. A trip blank is prepared at the laboratory and placed in the transport cooler. It remains with the cooler and is analyzed by the laboratory along with the groundwater samples. A field blank is prepared in the field when sampling equipment is not dedicated. The field blank is prepared after a pump or bailer has been steam-cleaned, prior to use in a second well, and is analyzed along with the other samples. The field blank demonstrates the quality of in-field cleaning procedures to prevent cross-contamination.

To minimize the potential for cross-contamination between wells, all the well-development and water-sampling equipment that is not dedicated to a well is steam-cleaned between each well. As a second precautionary measure, wells will be sampled in order of least to highest concentrations as established by previous analyses.

ATTACHMENT B

FIELD SAMPLING AND MONITORING FORMS

LIQUID-LEVEL DATA SHEET

Project No.	Project Name	Date	Initials
1-124.06	Dublin	10/24/90	AD

Well No.	HISTORIC DATA/DATE: DTLH	DTW	LHT	Sounded Depth	CURRENT DATA: DTLH	DTW	LHT	Sounded Depth	Method WLP / PB / IP *	Time	Comments
EA 1						11.12				9:52	
EA 2						10.08				9:50	
EA 3						11.35				9:54	

* WLP = Water-Level Probe
PB = Product Bailer
IP = Interface Probe

WATER SAMPLING DATA

Project No.	Project Name	Well Name	Date	Time	Initials
1-124.06	Dublin	EA 1	10/24/90	11:50	GD

WELL DATA

Well Depth (ft.)	Sounded Depth (ft.)	Well Type
37.72		☒ Monitor Well ☐ Sampling Port ☐ Other (describe)
DTW (ft.) 11.12	**Date/Time**	
Well Diam. (in.) 4	**LHC Present?** ☐ Yes ☒ No	**LHC Thickness**

CHEMICAL DATA

	Time	Ph Probe No.	Temp Probe No.	Cond Probe No.
1				umhos
2				
3				

EVACUATION

Initial Height of Water in Casing (ft) 26.6

Volume (gal) 17.36

Volume to be Evacuated ☒ x3 ☐ x4 52.1

Formulas and Conversions

r = well radius in ft.
h = ht. of water column in ft.
vol. of column = $\pi r^2 h$
7.48 gal / ft³

V_2 " casing = 0.163 gal / ft.
V_3 " casing = 0.367 gal / ft.
V_4 " casing = 0.653 gal / ft.
$V_{4.5}$ " casing = 0.826 gal / ft.
V_5 " casing = 1.470 gal / ft.
V_8 " casing = 2.610 gal / ft.
V_{10} " casing = 4.080 gal / ft.

Sampling Equipment

Dedicated System ☒ Bladder Pump ☐ Bailer

PVC Bailer ☐ 1/2 in. ☐ 1 1/4 in. ☐ 3 in.

Sampling Port No.

Volume (gal)	Rate (gpm)

Evacuation

	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	12:50			
Start Time	11:54			
Minutes	96			
Amt Evac'd	52.1 gal	gal	gal	gal
Total Evac'd	52.1 gal	gal	gal	gal
Total Minutes	96 min	min	min	min
Evac Rate	.54 gpm	gpm	gpm	gpm

Pumped Dry? ☐ Yes ☒ No **After (gal)**

Depth to Water During Pumping (ft)	Time
14.35	12:25

Depth to Water for 80% Recovery	Recovery Rate (gpm)

Sampled After: ☐ 80% Rec. ☐ 2 hours **% Recovery at Time of Sampling**

Recovery

	Time	DTW
1		
2		
3		
4		
5		

SAMPLING

Point of Collection ☒ PE Hose ☐ End of Bailer ☐ Other:

Time Samples Taken 12:50 **Date** 10/24/90

Depth to Water (ft) 13.80 **Refrigerated?** ☒ Yes ☐ No

Sample Color clear **Odor** slight

Sediment / Foreign Matter none

Sampling Sequence

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
102490.01A	40	VOA	HCl	EPA 602/8015	SVL
B	↓	↓	↓	↓	↓

Container Codes: P = Plastic Bottle V = VOA B = Brown Glass C = Clear Glass Other: Describe

COMMENTS

WATER SAMPLING DATA

Project No.	Project Name	Well Name	Date	Time	Initials
1-124.06	Dunham	SA 2	10/24/90	10:15	ap

WELL DATA

Well Depth (ft.) 38.33	Sounded Depth (ft.)	Well Type ☒ Monitor Well ☐ Sampling Port ☐ Other (describe)
DTW (ft.) 10.08	Date/Time	
Well Diam. (in.) 4	LHC Present? ☐ Yes ☒ No	LHC Thickness

CHEMICAL DATA

	Time	Ph Probe No.	Temp Probe No.	Cond Probe No.
1				umhos
2				
3				

EVACUATION

Initial Height of Water in Casing (ft): 28.25

Volume (gal): 18.45

Volume to be Evacuated: ☒ x3 ☐ x4 — 55.3

Formulas and Conversions

r = well radius in ft.
h = ht. of water column in ft.
vol. of column = $\pi r^2 h$
7.48 gal / ft³

V_2 " casing = 0.163 gal / ft.
V_3 " casing = 0.367 gal / ft.
V_4 " casing = 0.653 gal / ft.
$V_{4.5}$ " casing = 0.826 gal / ft.
V_6 " casing = 1.470 gal / ft.
V_8 " casing = 2.610 gal / ft.
V_{10} " casing = 4.080 gal / ft.

Sampling Equipment

Dedicated System: ☒ Bladder Pump ☐ Bailer

PVC Bailer: ☐ 1/2 in. ☐ 1 1/4 in. ☐ 3 in.

Sampling Port No.

Volume (gal)	Rate (gpm)

Evacuation

	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	11:45			
Start Time	10:15			
Minutes	130			
Amt Evac'd	55.3 gal	gal	gal	gal
Total Evac'd	55.3 gal	gal	gal	gal
Total Minutes	130 min	min	min	min
Evac Rate	.43 gpm	gpm	gpm	gpm

Pumped Dry? ☐ Yes ☒ No — After (gal)

Depth to Water During Pumping (ft): 13.33 — Time: 11:05

Depth to Water for 80% Recovery

Recovery Rate (gpm)

Sampled After: ☐ 80% Rec. ☐ 2 hours

% Recovery at Time of Sampling

Recovery

	Time	DTW
1		
2		
3		
4		
5		

SAMPLING

Point of Collection: ☒ PE Hose ☐ End of Bailer ☐ Other:

Time Samples Taken: 11:30 — Date: 10/24/90

Depth to Water (ft): 12.94 — Refrigerated? ☒ Yes ☐ No

Sample Color: clear — Odor: none

Sediment / Foreign Matter: none

Sampling Sequence

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
10240.02A	40	V	HCl	602/8015	SAL
B	↓	↓	↓	↓	↓

Container Codes: P = Plastic Bottle, V = VOA, B = Brown Glass, C = Clear Glass, Other: Describe

COMMENTS

WESTERN GEOLOGIC RESOURCES, INC.

WATER SAMPLING DATA

Project No.	Project Name	Well Name	Date	Time	Initials
1-124.06	Dublin	EA 3	10/24/90	10:10	RB

WELL DATA

Well Depth (ft.)	Sounded Depth (ft.)	Well Type: ☐ Monitor Well ☐ Sampling Port ☐ Other (describe)
DTW (ft.)	Date/Time	
Well Diam. (in.)	LHC Present? ☐ Yes ☐ No	LHC Thickness

CHEMICAL DATA

	Time	Ph Probe No.	Temp Probe No.	Cond Probe No.	
1					umhos
2					
3					

EVACUATION

Initial Height of Water in Casing (ft): 22.49

Volume (gal): 14.69

Volume to be Evacuated: ☒ x3 ☐ x4: 44.1

Formulas and Conversions

r = well radius in ft.
h = ht. of water column in ft.
vol. of column = $\pi r^2 h$
7.48 gal / ft³

V_2 " casing = 0.163 gal / ft.
V_3 " casing = 0.367 gal / ft.
V_4 " casing = 0.653 gal / ft.
$V_{4.5}$ " casing = 0.826 gal / ft.
V_6 " casing = 1.470 gal / ft.
V_8 " casing = 2.610 gal / ft.
V_{10} " casing = 4.080 gal / ft.

Sampling Equipment

Dedicated System: ☒ Bladder Pump ☐ Bailer

PVC Bailer: ☐ 1/2 in. ☐ 1 1/4 in. ☐ 3 in.

Sampling Port No.

Volume (gal)	Rate (gpm)

Evacuation

	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	11:41			
Start Time	10:16			
Minutes	125			
Amt Evac'd	44.5 gal	gal	gal	gal
Total Evac'd	44.5 gal	gal	gal	gal
Total Minutes	125 min	min	min	min
Evac Rate	.36 gpm	gpm	gpm	gpm

Pumped Dry? ☐ Yes ☒ No — After (gal)

Depth to Water During Pumping (ft): 14.09 — Time: 11:17

Depth to Water for 80% Recovery:

Recovery Rate (gpm):

Sampled After: ☐ 80% Rec. ☐ ~~2 hours~~

% Recovery at Time of Sampling:

Recovery

	Time	DTW
1		
2		
3		
4		
5		

SAMPLING

Point of Collection: ☒ PE Hose ☐ End of Bailer ☐ Other:

Time Samples Taken: 1144 — Date: 10/24/90

Depth to Water (ft): 15.10 — Refrigerated? ☒ Yes ☐ No

Sample Color: Cloudy — Odor: no

Sediment / Foreign Matter: none

Sampling Sequence

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
1024.0.03 A	40	V	HCl	602/8015	SAL
B	↓	↓	↓	↓	↓

Container Codes: P = Plastic Bottle; V = VOA; B = Brown Glass; C = Clear Glass; Other: Describe

COMMENTS

WESTERN GEOLOGIC RESOURCES, INC.

WATER SAMPLING DATA

Project No.	Project Name	Well Name	Date	Time	Initials
1-1240.06	Dublin	TB	10/24/90	—	AD

WELL DATA

Well Depth (ft.)	Sounded Depth (ft.)	Well Type ☐ Monitor Well ☐ Sampling Port ☐ Other (describe)
DTW (ft.)	Date/Time	
Well Diam. (in.)	LHC Present? ☐ Yes ☐ No	LHC Thickness

CHEMICAL DATA

	Time	Ph Probe No.	Temp Probe No.	Cond Probe No.
1				umhos
2				
3				

EVACUATION

Initial Height of Water in Casing (ft)	**Formulas and Conversions** r = well radius in ft. h = ht. of water column in ft. vol. of column = $\pi r^2 h$ 7.48 gal / ft³ V_2 " casing = 0.163 gal / ft. V_3 " casing = 0.367 gal / ft. V_4 " casing = 0.653 gal / ft. $V_{4.5}$ " casing = 0.826 gal / ft. V_5 " casing = 1.470 gal / ft. V_8 " casing = 2.610 gal / ft. V_{10} " casing = 4.080 gal / ft.	**Sampling Equipment** Dedicated System ☐ Bladder Pump ☐ Bailer PVC Bailer ☐ 1/2 in. ☐ 1 1/4 in. ☐ 3 in.
Volume (gal)		Sampling Port No.
Volume to be Evacuated ☐ x 3 ☐ x 4		Volume (gal) / Rate (gpm)

Evacuation

	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time				
Start Time				
Minutes				
Amt Evac'd	gal	gal	gal	gal
Total Evac'd	gal	gal	gal	gal
Total Minutes	min	min	min	min
Evac Rate	gpm	gpm	gpm	gpm

Pumped Dry? ☐ Yes ☐ No	After (gal)	Recovery: Time / DTW 1 2 3 4 5
Depth to Water During Pumping (ft)	Time	
Depth to Water for 80% Recovery	Recovery Rate (gpm)	
Sampled After: ☐ 80% Rec. ☐ 2 hours	% Recovery at Time of Sampling	

SAMPLING

Point of Collection ☐ PE Hose ☐ End of Bailer ☐ Other:	Time Samples Taken	Date
	Depth to Water (ft)	Refrigerated? ☐ Yes ☐ No
Sample Color	Odor	
Sediment / Foreign Matter		
Sampling Sequence		

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
10240.04A	<40	V	HCl	602/8015	SAL
B	↓	↓	↓	↓	

Container Codes: P = Plastic Bottle; V = VOA; B = Brown Glass; C = Clear Glass; Other: Describe

COMMENTS

TB's from SAL

WESTERN GEOLOGIC RESOURCES, INC.

ATTACHMENT C

CHAIN-OF-CUSTODY FORM

SF # 11116

Chain-of-Custody Record

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

Chevron Facility Number: 92582
Consultant Release Number:
Consultant Project Number: 1-124.06
Consultant Name: WESTERN GEOLOGIC RESOURCES
Address: 2169 E FRANCISCO SAN RAFAEL
Fax Number: 415 457 8521
Project Contact (Name): ERIC STEVENSON
(Phone): 415 457 7595

Chevron Contact (Name): BOB FOSS
(Phone): 842 9594
Laboratory Name: SAL
Contract Number: 261280O
Samples Collected by (Name): A DOUG/D BRALDWIN
Collection Date: 10-24-90
Signature: BB

Sample Number	Lab Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite	Time	Sample Preservation	Iced	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624	Total Lead DHS-Luft	EDB DHS-AB 1803			Remarks
10240-01AB		2	W		1250	HCl	X	X			X						
-02AB		↓	↓		1150	↓	↓	↓			↓						
-03AB					1117												
-04AB					—												

Please initial: DMW
Samples Stored in ice. yes
Appropriate containers. yes
Samples preserved. yes
VOA's without headspace. yes
Comments: None
OK

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
BB	W&A	10/24/90 1445			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
			Dmyt & Nwogu		10/24/90 14:45

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

Printed in U.S.A.

White / Project File Canary / Sampler Pink / Lab

ATTACHMENT D

LABORATORY REPORTS WITH QUALITY ASSURANCE/
QUALITY CONTROL DOCUMENTS

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

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

LABORATORY NO.: 11116
CLIENT: Western Geologic Resources
CLIENT JOB NO.: 1-124.06

DATE RECEIVED: 10/24/90
DATE REPORTED: 10/31/90

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11116- 1	10240.01AB	10/24/90	10/27/90
11116- 2	10240.02AB	10/24/90	10/27/90
11116- 3	10240.03AB	10/24/90	10/27/90
11116- 4	10240.04AB	10/24/90	10/27/90

Laboratory Number:	11116 1	11116 2	11116 3	11116 4
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	280	ND<50	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	69	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	13	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	11	ND<0.5	ND<0.5	ND<0.5
XYLENES:	16	ND<0.5	ND<0.5	ND<0.5

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
Diesel by Modified EPA SW-846 Method 8015
Gasoline by Purge and Trap: EPA MEthod 8015/5030
ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

QA/QC INFORMATION
SET: 11116

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT

ug/L = part per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Duplicate RPD NA
Minimum Detection Limit in Water: 5000ug/L

Modified EPA Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 1000ug/L
Daily Standard run at 200mg/L; %Diff Diesel = NA
MS/MSD Average Recovery = NA: Duplicate RPD = NA

8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Daily Standard run at 2mg/L; %Diff Gasoline = <15
MS/MSD Average Recovery = 106%: Duplicate RPD = <8

8020/BTXE
Minimum Quantitation Limit in Water: 0.50ug/L
Daily Standard run at 20ug/L; %Diff = <15%
MS/MSD Average Recovery = 100%: Duplicate RPD = <4

Richard Srna, Ph.D.
Laboratory Director