



**Chevron U.S.A. Inc.**

2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500  
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

*Give a call about the letter.*

Marketing Department

91 APR 10 AM 11:05  
April 5, 1991

Mr. Gil Wistar  
Alameda County Environmental Health  
80 Swan Way, Room 200  
Oakland, CA 94621

Re: Former Chevron S.S. #9-2582  
7420 Dublin Blvd., Dublin, CA

Dear Mr. Wistar:

Enclosed is a groundwater monitoring report dated March 7, 1991 which was prepared by Chevron's consultant, Western Geological Resources (WGR), to describe the results of groundwater monitoring on January 31, 1991 at the site referenced above.

As Chevron's records do not indicate that the previous quarter's groundwater monitoring report was sent to your office, a copy of the November 27, 1990 report is also enclosed. Chevron apologizes for this and will attempt to prevent this from occurring in the future.

Chevron has maintained a groundwater monitoring program at this site since three wells were installed in October 1988. Groundwater monitoring information has been collected for ten (10) consecutive quarters during this two and one half year period. The monitoring program has generated the following information:

- (1) The direction of groundwater gradient at the site has consistently been in a northwest direction throughout the entire hydrologic yearly cycle.
- (2) The level of dissolved phase hydrocarbons in the groundwater has been consistent with no detectable levels in wells EA2 and EA3 and with moderate levels in well EA1.

Because of the low levels of dissolved phase hydrocarbons present in the groundwater at this site, Chevron will continue its monitoring program. However, due to the consistency of the groundwater information collected by Chevron during the monitoring at this site, Chevron does not feel that continued monitoring on a quarterly basis is necessary to maintain an effective monitoring program. Rather, Chevron believes that monitoring on a semi-annual basis during the first and third quarters of each year would provide the necessary information to effectively monitor the site.

Chevron has instructed its consultant, WGR, to follow the revised schedule of groundwater monitoring and reporting shown below:

Monitoring

- Measure groundwater elevations in wells EA1, EA2, and EA3 on a semi-annual basis during the first and third quarters of each year.

- Collect groundwater samples for laboratory analyses from wells EA1, EA2, and EA3 on a semi-annual basis during the first and third quarters of each year.


**Reporting**

- Submit a report to the appropriate regulatory agencies on a semi-annual basis to document all groundwater monitoring activities since the previous report.

If you have any questions or comments, please contact Mr. Clint Rogers at (415) 842-8658. Mr. Rogers has recently become the project manager for this site replacing Mr. Bob Foss.

Sincerely,

Chevron U.S.A.

By   
Clint B. Rogers  
Environmental Engineer

**Enclosures**

cc: Lester Feldman, San Francisco Bay RWQCB  
Janet Clinton (for Parkway Three), 2425 Webb Avenue, Suite 200, Alameda, CA 94501  
Hooshang Hadjian, 7420 Dublin Blvd., Dublin, CA  
Elizabeth Adams, WGR (without enclosures)



**WESTERN GEOLOGIC RESOURCES INC.**

2169 E. FRANCISCO BLVD., SUITE B / SAN RAFAEL  
CALIFORNIA 94901 / FAX 415.457.8521  
TELE 415.457.7595

7 March 1991

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

**Re: Quarterly Groundwater Monitoring**  
Sampled January 1991  
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 January 1991 by Western Geologic Resources, Inc. (WGR) at the subject site (Figure 1).

#### **GROUNDWATER SAMPLING**

On 31 January 1991, 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 31 January 1991. Groundwater-elevation data are presented in Table 1. Average groundwater flow direction for 31 January 1991 was to the northwest at an average gradient of 0.7%.



## 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 well EA-2 and EA-3 during the January sampling, similar to previous results.

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

Sincerely,  
Western Geologic Resources, Inc.

*Dean K. Osaki*

Dean K. Osaki  
Environmental Technician

Eric D. Stevenson  
Senior Staff Engineer

DKO/EDS:vw



R. Foss/7 March 1991

3

#### **FIGURES**

1. Site Location Map
2. Potentiometric Surface of Shallow Groundwater, 31 January 1991

#### **TABLES**

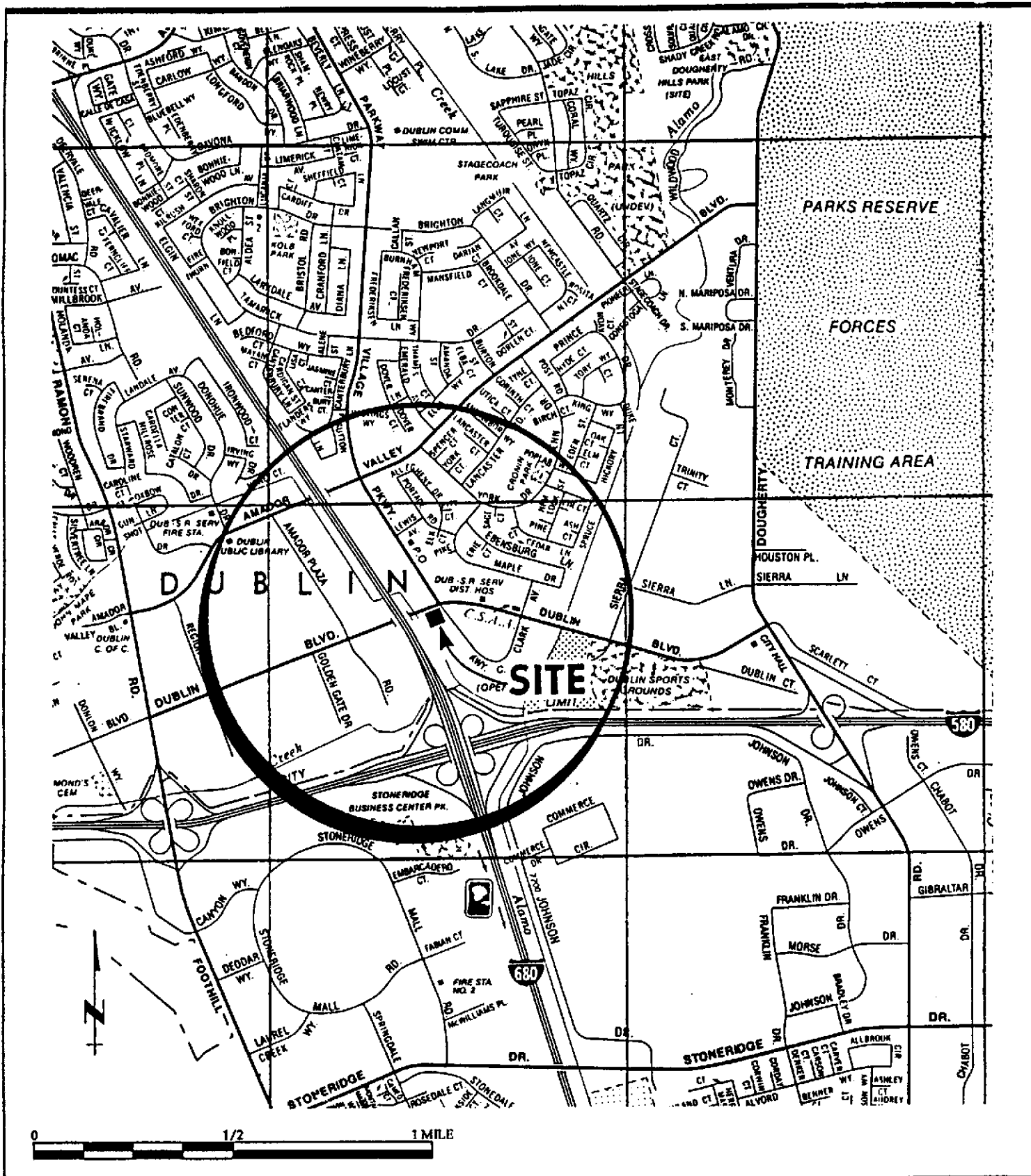
1. Groundwater-Elevation Data
2. Analytic Results: Groundwater Samples

#### **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



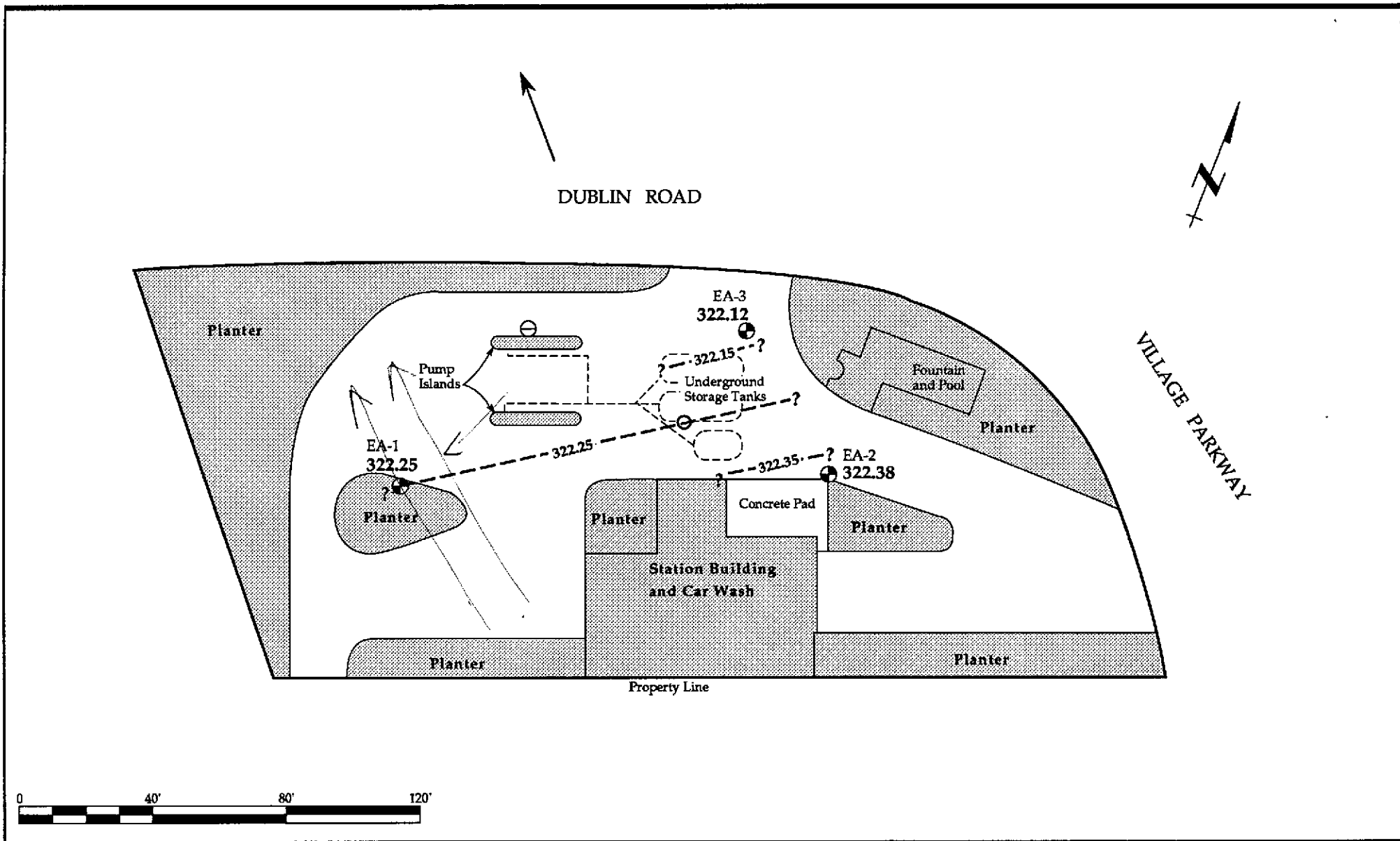
**FIGURES**






Site Location Map  
Chevron Service Station #92582  
Dublin, California

FIGURE

1



**EXPLANATION**

- 
**EA-1**  
**322.25**
  - 
  - 325.25 - - - ?**
  - 
- Groundwater Monitor Well and Groundwater Elevation, feet above mean sea level
- 10" Diameter PVC Casing
- Groundwater Elevation Contour, feet above mean sea level, dashed where inferred, queried where uncertain
- Estimated groundwater flow direction

Potentiometric Surface of Shallow Groundwater  
 31 January 1991  
 Chevron Service Station #92582  
 Dublin, California

FIGURE

**2**





**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-1	31 Jan 91	333.41	11.16		322.25
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-2	31 Jan 91	332.59	10.21		322.38
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
EA-3	31 Jan 91	333.64	11.52		322.12



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

Well ID #	Date	TOC <-----ft----->	DTW	Elev-W
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	---	---	---
PVC	31 Jan 91	---	---	---

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-1	31 Jan 91	SAL	8015/8020	460	160	11	17	17	---
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-2	31 Jan 91	SAL	8015/8020	<50	<0.5	<0.5	<0.5	<0.5	---
EA-2D	31 Jan 91	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	---
EA-3	31 Jan 91	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	---
TB	31 Jan 91	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. 1-124.06 Project Name DUBLIN Date 1-31-91 Initials MPF

Well No.	HISTORIC DATA/DATE:				CURRENT DATA:				Method WLP/PB/IP*	Time	Comments
	DTLH	DTW	LHT	Sounded Depth	DTLH	DTW	LHT	Sounded Depth			
EA1						11.16			WLP	10:32	
EA2						10.21			↓	10:30	
EA3						11.52			↓	10:27	

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

# WATER SAMPLING DATA

Project No. <u>1-124.06</u>	Project Name <u>DUBLIN</u>	Well Name <u>EAI</u>	Date <u>1-31-91</u>	Time <u>1215</u>	Initials <u>MPF</u>
--------------------------------	-------------------------------	-------------------------	------------------------	---------------------	------------------------

<b>WELL DATA</b>		
Well Depth (ft.) <u>37.7</u>	Sounded Depth (ft.)	Well Type <input checked="" type="checkbox"/> Monitor Well <input type="checkbox"/> Sampling Port <input type="checkbox"/> Other (describe)
DTW (ft.) <u>11.66</u>	Date/Time	
Well Diam. (in.) <u>4</u>	LHC Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	LHC Thickness

<b>CHEMICAL DATA</b>				
Time	Ph Probe No.	Temp Probe No.	Cond Probe No.	
1 _____	_____	_____	_____	umhos
2 _____	_____	_____	_____	
3 _____	_____	_____	_____	

<b>EVACUATION</b>		
Initial Height of Water in Casing (ft.) <u>26.54</u>	Formulas and Conversions <small>r = well radius in ft. h = ht. of water column in ft. vol. of column = <math>\pi r^2 h</math> 7.48 gal / ft</small>	Sampling Equipment Dedicated System <input checked="" type="checkbox"/> Bladder Pump <input type="checkbox"/> Bailor PVC Bailor <input type="checkbox"/> 1/2 in. <input type="checkbox"/> 1 1/4 in. <input type="checkbox"/> 3 in.
Volume (gal) <u>17.3</u>	$V_1$ casing = 0.183 gal / ft. $V_2$ casing = 0.367 gal / ft. $V_3$ 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 Port No.
Volume to be Evacuated <input checked="" type="checkbox"/> x3 <input type="checkbox"/> x4 <u>52.0</u>		Volume (gal)

<b>SAMPLING</b>	
Point of Collection <input checked="" type="checkbox"/> PE Hose <input type="checkbox"/> End of Bailor <input type="checkbox"/> Other:	Time Samples Taken <u>1252</u> Date <u>1-31-91</u>
	Depth to Water (ft.) <u>14.36</u> Refrigerated? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Color <u>CLEAR</u>	Odor _____
Sediment / Foreign Matter _____	
Sampling Sequence _____	

Evacuation	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	<u>1252</u>	_____	_____	_____
Start Time	<u>1217</u>	_____	_____	_____
Minutes	<u>35</u>	_____	_____	_____
Amt Evac'd	<u>52</u> gal	_____ gal	_____ gal	_____ gal
Total Evac'd	_____ gal	_____ gal	_____ gal	_____ gal
Total Minutes	_____ min	_____ min	_____ min	_____ min
Evac Rate	<u>1.4</u> gpm	_____ gpm	_____ gpm	_____ gpm

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
<u>01301-01A</u>	<u>40</u>	<u>VOA</u>	<u>HCl</u>	<u>EPA 602/8015</u>	<u>SAL</u>
<u>↓</u>	<u>B</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>

Pumped Dry? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	After (gal)	<b>Recovery</b>	
		Time	DTW
Depth to Water During Pumping (ft.) <u>15.27</u>	<u>~36 gals.</u>	1 _____	_____
	<u>12:39</u>	2 _____	_____
Depth to Water for 80% Recovery	Recovery Rate (gpm)	3 _____	_____
		4 _____	_____
Sampled After: <input type="checkbox"/> 80% Rec. <input type="checkbox"/> 2 hours	% Recovery at Time of Sampling	5 _____	_____

Container Codes: P = Plastic Bottle, V = VOA, B = Brown Glass, C = Clear Glass, Other: Describe	<b>COMMENTS</b> <u>7/17 11/11</u>
---	--------------------------------------

# WATER SAMPLING DATA

Project No. <b>1-124.06</b>	Project Name <b>DUBLIN</b>	Well Name <b>EA2</b>	Date <b>1-31-91</b>	Time <b>1115</b>	Initials <b>MVP</b>
--------------------------------	-------------------------------	-------------------------	------------------------	---------------------	------------------------

<b>WELL DATA</b>		
Well Depth (ft.) <b>38.3</b>	Sounded Depth (ft.)	Well Type <input checked="" type="checkbox"/> Monitor Well <input type="checkbox"/> Sampling Port <input type="checkbox"/> Other (describe)
DTW (ft.) <b>10.21</b>	Date/Time	
Well Diam. (in.) <b>4</b>	LHC Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	LHC Thickness

<b>CHEMICAL DATA</b>			
Time	Ph Probe No.	Temp Probe No.	Cond Probe No.
1 _____	_____	_____	_____ umhos
2 _____	_____	_____	_____
3 _____	_____	_____	_____

<b>EVACUATION</b>		
Initial Height of Water in Casing (ft) <b>28.09</b>	Formulas and Conversions <small>r = well radius in ft. h = ht. of water column in ft. vol. of column = <math>\pi r^2 h</math> 7.48 gal / ft<sup>3</sup></small>  $V_2$ casing = 0.163 gal / ft. $V_3$ casing = 0.367 gal / ft. $V_4$ casing = 0.653 gal / ft. $V_5$ 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 <input checked="" type="checkbox"/> Bladder Pump <input type="checkbox"/> Bailer Dedicated System PVC Bailer <input type="checkbox"/> 1/2 in. <input type="checkbox"/> 1 1/4 in. <input type="checkbox"/> 3 in.
Volume (gal) <b>18.3</b>		Sampling Port No.
Volume to be Evacuated <input checked="" type="checkbox"/> x3 <input type="checkbox"/> x4 <b>55.0</b>		Volume (gal)      Rate (gpm)

<b>SAMPLING</b>			
Point of Collection <input checked="" type="checkbox"/> PE Hose <input type="checkbox"/> End of Bailer <input type="checkbox"/> Other:	Time Samples Taken <b>1203</b>	Date <b>1-31-91</b>	
	Depth to Water (ft) <b>16.00</b>	Refrigerated? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Color <b>CLEAR</b>	Odor _____		
Sediment / Foreign Matter _____			
Sampling Sequence			

Evacuation	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	<b>1203</b>	_____	_____	_____
Start Time	<b>1121</b>	_____	_____	_____
Minutes	<b>42</b>	_____	_____	_____
Amt Evac'd	<b>55</b> gal	_____ gal	_____ gal	_____ gal
Total Evac'd	_____ gal	_____ gal	_____ gal	_____ gal
Total Minutes	_____ min	_____ min	_____ min	_____ min
Evac Rate	<b>1.3</b> gpm	_____ gpm	_____ gpm	_____ gpm

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
<b>01301-02A</b>	<b>40</b>	<b>VOA</b>	<b>HCl</b>	<b>EPA 602/8015</b>	<b>SAL</b>
<b>01301-02B</b>	<b>↓</b>	<b>↓</b>	<b>↓</b>	<b>↓</b>	<b>↓</b>
<b>01301-05A</b>	<b>40</b>	<b>VOA</b>	<b>HCl</b>	<b>EPA 602/8015</b>	<b>SAL</b>
<b>01301-05B</b>	<b>↓</b>	<b>↓</b>	<b>↓</b>	<b>↓</b>	<b>↓</b>

Pumped Dry? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	After (gal)	Recovery	
		Time	DTW
Depth to Water During Pumping (ft) <b>16.10</b>	<b>~37 gal.</b>	1 _____	_____
	<b>11:49</b>	2 _____	_____
Depth to Water for 80% Recovery	Recovery Rate (gpm)	3 _____	_____
Sampled After: <input type="checkbox"/> 80% Rec. <input type="checkbox"/> 2 hours	% Recovery at Time of Sampling	4 _____	_____
		5 _____	_____

Container Codes: P = Plastic Bottle V = VOA B = Brown Glass C = Clear Glass Other: Describe	
<b>COMMENTS</b>	
<b>### 11</b>	

# WATER SAMPLING DATA

Project No. <b>1-124.06</b>	Project Name <b>DUBLIN</b>	Well Name <b>EPA 3</b>	Date <b>1-31-91</b>	Time <b>1030</b>	Initials <b>MPF</b>
--------------------------------	-------------------------------	---------------------------	------------------------	---------------------	------------------------

<b>WELL DATA</b>		
Well Depth (ft.) <b>33.8</b>	Sounded Depth (ft.)	Well Type <input checked="" type="checkbox"/> Monitor Well <input type="checkbox"/> Sampling Port <input type="checkbox"/> Other (describe)
DTW (ft.) <b>11.52</b>	Date/Time	
Well Diam. (in.) <b>4</b>	LHC Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	LHC Thickness

<b>CHEMICAL DATA</b>			
Time	Ph Probe No.	Temp Probe No.	Cond Probe No.
1 _____	_____	_____	_____ umhos
2 _____	_____	_____	_____
3 _____	_____	_____	_____

<b>EVAUATION</b>		
Initial Height of Water in Casing (ft.) <b>22.28</b>	Formulas and Conversions <small>r = well radius in ft. h = ht. of water column in ft. vol. of column = π r<sup>2</sup> h 7.48 gal / ft<sup>3</sup></small>	Sampling Equipment Dedicated System <input checked="" type="checkbox"/> Bladder Pump <input type="checkbox"/> Bailor PVC Bailor <input type="checkbox"/> 1/2 in. <input type="checkbox"/> 1 1/4 in. <input type="checkbox"/> 3 in.
Volume (gal) <b>14.5</b>	$V_2$ casing = 0.163 gal / ft. $V_4$ casing = 0.367 gal / ft. $V_6$ casing = 0.653 gal / ft. $V_8$ casing = 0.826 gal / ft. $V_{10}$ casing = 1.470 gal / ft. $V_{12}$ casing = 2.610 gal / ft. $V_{14}$ casing = 4.080 gal / ft.	Sampling Port No.
Volume to be Evacuated <input checked="" type="checkbox"/> x3 <input type="checkbox"/> x4 <b>43.6</b>		Volume (gal)

<b>SAMPLING</b>	
Point of Collection <input checked="" type="checkbox"/> PE Hose <input type="checkbox"/> End of Bailor <input type="checkbox"/> Other:	Time Samples Taken <b>11:12</b> Date <b>1-31-91</b>
	Depth to Water (ft) <b>17.35</b> Refrigerated? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Color <b>CLEAR</b>	Odor <b>SLIGHT</b>
Sediment / Foreign Matter	
Sampling Sequence	

Evacuation	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	<b>11:12</b>	_____	_____	_____
Start Time	<b>10:38</b>	_____	_____	_____
Minutes	<b>34</b>	_____	_____	_____
Amt Evac'd	<b>44</b> gal	_____ gal	_____ gal	_____ gal
Total Evac'd	_____ gal	_____ gal	_____ gal	_____ gal
Total Minutes	_____ min	_____ min	_____ min	_____ min
Evac Rate	<b>1.3</b> gpm	_____ gpm	_____ gpm	_____ gpm

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
<b>01301-03A</b>	<b>40</b>	<b>VOA</b>	<b>HCl</b>	<b>EPA 602/8015</b>	<b>SAL</b>
↓ <b>B</b>	↓	↓	↓	↓	↓

Pumped Dry? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	After (gal)	<b>Recovery</b>	
Depth to Water During Pumping (ft.) <b>17.62 ~ 30 gal.</b>	Time <b>11:04</b>	Time	DTW
Depth to Water for 80% Recovery	Recovery Rate (gpm)	1 _____	_____
Sampled After: <input type="checkbox"/> 80% Rec. <input type="checkbox"/> 2 hours	% Recovery at Time of Sampling	2 _____	_____
		3 _____	_____
		4 _____	_____
		5 _____	_____

Container Codes:	P = Plastic Bottle V = VOA	B = Brown Glass C = Clear Glass	Other: Describe
<b>COMMENTS</b>			
<b>111</b>			

# WATER SAMPLING DATA

Project No. <u>1-124.06</u>	Project Name <u>DUBLIN</u>	Well Name <u>TRAVEL BLANK</u>	Date <u>1-31-91</u>	Time <u>10:00</u>	Initials <u>MPP</u>
--------------------------------	-------------------------------	----------------------------------	------------------------	----------------------	------------------------

WELL DATA	Well Depth (ft.)	Sounded Depth (ft.)	Well Type <input type="checkbox"/> Monitor Well <input type="checkbox"/> Sampling Port <input type="checkbox"/> Other (describe)
DTW (ft.)	Date/Time		
Well Diam. (in.)	LHC Present? <input type="checkbox"/> Yes <input type="checkbox"/> 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 $r = \text{well radius in ft.}$ $h = \text{ht. of water column in ft.}$ $\text{vol. of column} = \pi r^2 h$ $7.48 \text{ gal / ft}^3$	Sampling Equipment <input type="checkbox"/> Dedicated System <input type="checkbox"/> Bladder Pump <input type="checkbox"/> Bailor <input type="checkbox"/> PVC Bailor <input type="checkbox"/> 1/2 in. <input type="checkbox"/> 1 1/4 in. <input type="checkbox"/> 3 in.
Volume (gal)	Volume to be Evacuated <input type="checkbox"/> x3 <input type="checkbox"/> x4		Sampling Port No.
		$V_2$ casing = 0.163 gal / ft. $V_3$ casing = 0.367 gal / ft. $V_4$ casing = 0.653 gal / ft. $V_5$ 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.	Volume (gal)      Rate (gpm)

SAMPLING		Time Samples Taken	Date
Point of Collection <input type="checkbox"/> PE Hose <input type="checkbox"/> End of Bailor <input type="checkbox"/> Other:		Depth to Water (ft)	Refrigerated? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Color		Odor	
Sediment / Foreign Matter			
Sampling Sequence			

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

Sample ID No.	Volume (ml)	Container	Preservative	Analysis	Lab
<u>01301-04A</u>	<u>40</u>	<u>VOA</u>	<u>HCl</u>	<u>EPA 602/8015</u>	<u>SAL</u>
<u>↓ B</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>

Pumped Dry? <input type="checkbox"/> Yes <input type="checkbox"/> No	After (gal)	Recovery	
Depth to Water During Pumping (ft)		Time	DTW
Depth to Water for 80% Recovery		1	
Sampled After: <input type="checkbox"/> 80% Rec. <input type="checkbox"/> 2 hours		2	
% Recovery at Time of Sampling		3	
		4	
		5	

Container Codes: P = Plastic Bottle V = VOA B = Brown Glass C = Clear Glass Other: Describe
COMMENTS <u>TRAVEL BLANKED FILLED W/ ARROWHEAD DRINKING WATER FROM WGR DISPENSER.</u>



**ATTACHMENT C**  
**CHAIN-OF-CUSTODY FORM**

82395

# Chain-of-Custody Record

<p><b>Chevron U.S.A. Inc.</b>          P.O. Box 5004          San Ramon, CA 94583          FAX (415) 842-9591</p>	Chevron Facility Number <u><del>92566</del> 92582</u>	Chevron Contact (Name) <u>BOB FOSS</u>	
	Consultant Release Number _____	Consultant Project Number <u>1-124.06</u>	(Phone) <u>(415) 842-9594</u>
	Consultant Name <u>WGR INC.</u>		Laboratory Name <u>SUPERIOR ANALYTICAL LABORATORIES.</u>
	Address <u>SAN RAFAEL</u>		Contract Number <u>2612800</u>
	Fax Number _____		Samples Collected by (Name) <u>M. FRYE</u>
Project Contact (Name) <u>K. SPALA, E. STEVENSON</u>		Collection Date <u>1.31.91</u>	
(Phone) <u>(415) 457-7595</u>		Signature <u>M. Frye</u>	

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	Analyses To Be Performed							Remarks	
								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		
01301-01		2	E		1252	HL1	X	X				X				<div style="border: 2px solid black; padding: 10px; width: fit-content; margin: auto;"> <p>Please Initial: <u>RF</u></p> <p>Samples Stored in: <u>100</u></p> <p>Approved: <u>[Signature]</u></p> <p>Sample: <u>[Signature]</u></p> <p>VOA's: <u>[Signature]</u></p> <p>Comments: <u>[Signature]</u></p> </div>
01301-02					1205											
01301-03					1112											
01301-04					1200											
01301-05					1203											

Relinquished By (Signature) <u>M. Frye</u>	Organization <u>WGR INC</u>	Date/Time <u>1-31-91 1640</u>	Received By (Signature) <u>Bob Foss</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>1/31/91 1640</u>	Turn Around Time (Circle Choice) 24 Hrs 48 Hrs 5 Days <u>10 Days</u>
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>1-31-91 1508</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>[Signature]</u>	Date/Time <u>[Signature]</u>	
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>[Signature]</u>	Date/Time <u>[Signature]</u>	Received From Laboratory By (Signature) <u>[Signature]</u>		Date/Time <u>1030 2/1/91</u>	



## **ATTACHMENT D**

**LABORATORY REPORTS WITH QUALITY ASSURANCE/  
QUALITY CONTROL DOCUMENTS**



# SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319  
DOHS #220

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

LABORATORY NO.: 82395  
CLIENT: Western Geologic Resources  
CLIENT JOB NO.: 1-124.06

DATE RECEIVED: 02/01/91  
DATE REPORTED: 02/08/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
82395- 1	01301-01	01/31/91	02/08/91
82395- 2	01301-02	01/31/91	02/07/91
82395- 3	01301-03	01/31/91	02/07/91
82395- 4	01301-04	01/31/91	02/07/91
82395- 5	01301-05	01/31/91	02/07/91

Laboratory Number:	82395	82395	82395	82395	82395
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/l)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	460	ND<50	ND<50	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	11	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	17	ND<0.5	ND<0.5	ND<0.5	ND<0.5
XYLENES:	17	ND<0.5	ND<0.5	ND<0.5	ND<0.5

OUTSTANDING QUALITY AND SERVICE

# SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319  
DOHS #220

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

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2  
QA/QC INFORMATION  
SET: 82395

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:  
Minimum Detection Limit in Water: 5000ug/L

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

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/l  
Standard Reference: 10/25/90

SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/l  
Standard Reference: 01/11/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	10/25/90	200 ng	105	3	70-130
Benzene	01/11/91	200 ng	109	1	70-130
Toluene	01/11/91	200 ng	109	0	70-130
Ethyl Benzene	01/11/91	200 ng	110	0	70-130
Total Xylene	01/11/91	200 ng	108	0	70-130

Richard Srna, Ph.D.

*Richard B. Srna, Jr.*  
Laboratory Director

OUTSTANDING QUALITY AND SERVICE