



WESTERN GEOLOGIC RESOURCES INC.

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

7 September 1990

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

Re: Quarterly Groundwater Monitoring
Sampled August 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 August 1990 by Western Geologic Resources, Inc. (WGR) at the subject site (Figure 1).

GROUNDWATER SAMPLING

On 1 August 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 Laboratories, Inc. (SAL) of San Francisco, California.

GROUNDWATER FLOW

Figure 2 shows the potentiometric surface of shallow groundwater based on depth-to-water measurements taken on 1 August 1990. Groundwater elevation data are presented in Table 1. Hydrographs showing elevations over time are included as Attachment C. Average groundwater flow direction for 1 August 1990 was to the northwest at an average gradient of 0.5%.

COLORADO SPRINGS
SALT LAKE CITY
SAN DIEGO
VENTURA



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 (QA/QC) documents are included as Attachments D and E, respectively.

COMMENTS

The groundwater flow direction and gradient were similar to those reported during previous sampling events. The groundwater samples from monitor well EA-1 contained TPPH at a concentration of 300 parts-per-billion (ppb) and BTEX at concentrations of 86 ppb, 21 ppb, 10 ppb and 33 ppb, respectively, the highest concentrations detected for that well since sampling was initiated in October 1988. Concentrations of TPPH and BTEX were below the detectable limits for samples from wells EA-2 and EA-3 during the August sampling, similar to previous results.

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

Sincerely,
Western Geologic Resources, Inc.

David D. Reichard
David D. Reichard
Senior Staff Geologist

Eric D. Stevenson
Project Engineer

DDR/EDS:vw



R. Foss/7 September 1990

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FIGURES

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

TABLES

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

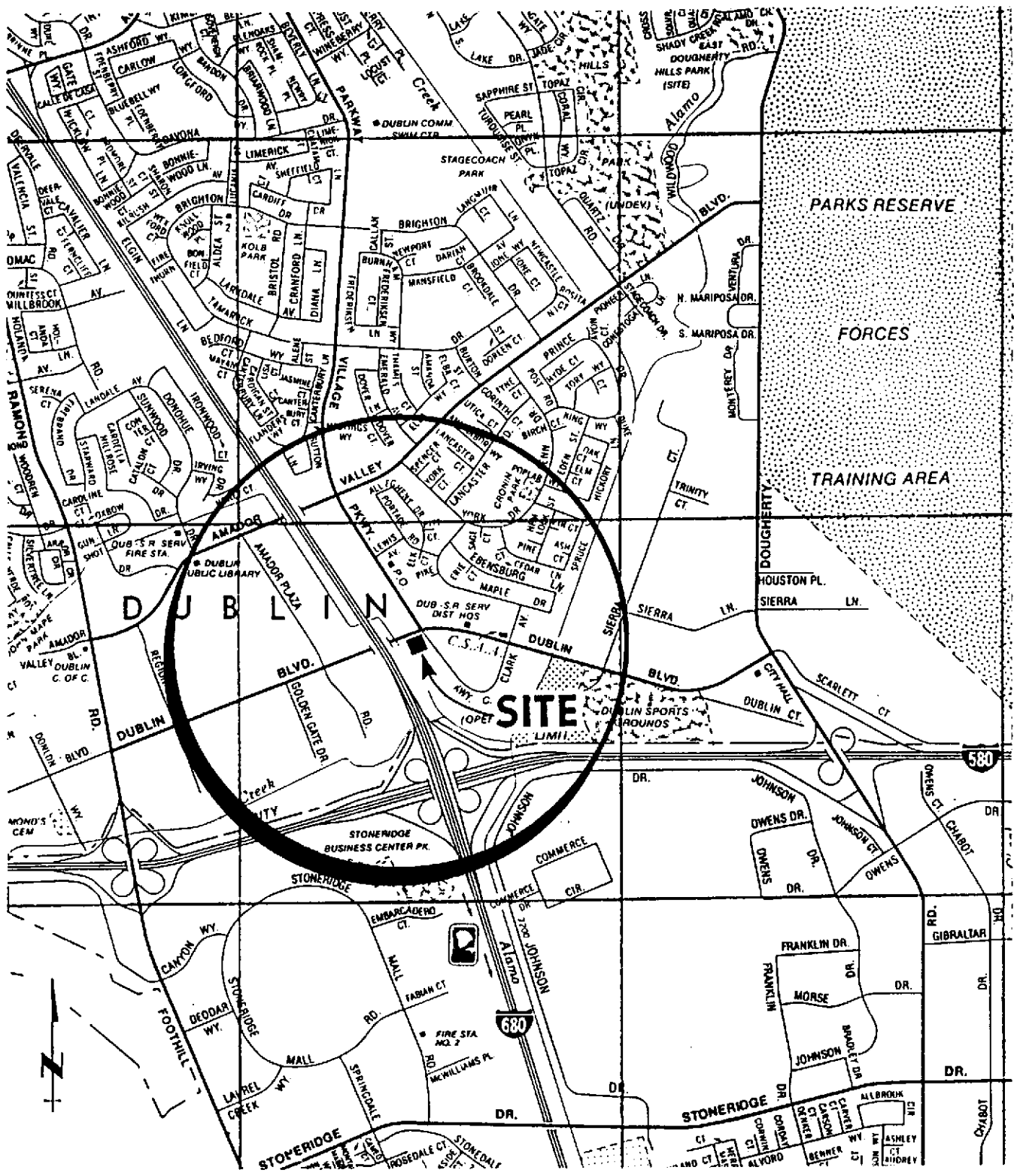
ATTACHMENTS

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

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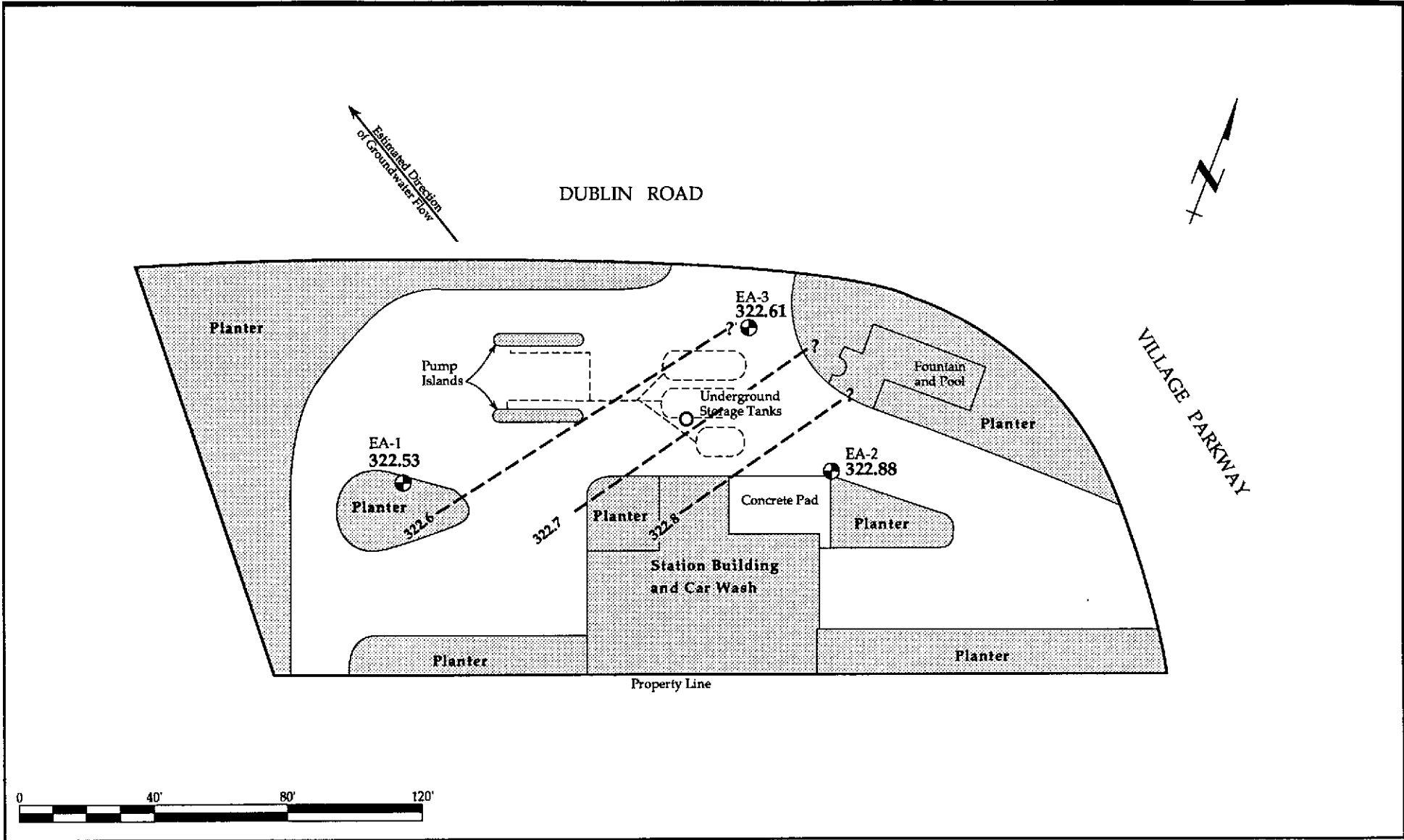
FIGURES



Site Location Map
 Chevron Service Station #92582
 Dublin, California

FIGURE

1



EXPLANATION	
 EA-1 322.53	Groundwater monitor well and groundwater elevation, feet above mean sea level
 	10" diameter PVC casing
 322.6 - - - ?	Groundwater elevation contour, feet above mean sea level, dashed where inferred, queried where uncertain

Potentiometric Surface of Shallow Groundwater
 1 August 1990
 Chevron Service Station #92582
 Dublin, California

WESTERN GEOLOGIC RESOURCES, INC.

FIGURE
2
 1-124.06



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

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

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

NOTES:

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

124G1AG0.VW



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

Well ID #	Date	Lab	EPA Method	FC	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	GAS	71	2.0	5.0	3.0	8.0	<0.5
EA-1	1 Aug 90	SAL	8015/8020	GAS	300	86.0	21.0	10.0	33.0	---
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	GAS	50	0.6	0.8	<0.5	2.0	<0.5
EA-2	1 Aug 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	Gas	240	90.0	1.2	13.0	3.3	---
EA-3	28 Mar 89 *	PACE	8015/8020	Gas	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	---
PVC	2 Aug 89	CCAS	8260	Gas	100,000	8,700	14,000	1,700	17,000	50
PVC-D	2 Aug 89	CCAS	8260	Gas	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	---	---	---	---	---	---	---	---	---



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

Well ID #	Date	Lab	EPA Method	FC	TPPH/TPH	B	T	E	X	1,2-DCA
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	---

NOTES:

FC = Fuel Characterization
 TPPH = Total Purgeable Petroleum Hydrocarbons
 TPH = Total Petroleum Hydrocarbons
 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.
 Gas = Gasoline
 NA = Not Available
 --- = Not analyzed/Not Applicable
 < = Less than the detection limit
 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.

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ATTACHMENT B

FIELD SAMPLING AND MONITORING FORMS

LIQUID-LEVEL DATA SHEET

Project No. <i>1-124.06</i>	Project Name <i>DUBLIN</i>	Date <i>2-1-90</i>	Initials <i>MGG/DF</i>
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Well No.	HISTORIC DATA/DATE:				CURRENT DATA:				Method WIRELESS <i>STEEL TAPE</i>	Time	Comments
	DTLH	DTW	LHT	Sounded Depth	DTLH	DTW	LHT	Sounded Depth			
<i>EA1</i>					<i>-</i>	<i>10.88</i>	<i>-</i>	<i>-</i>		<i>1046</i>	
<i>EA2</i>					<i>-</i>	<i>9.71</i>	<i>-</i>	<i>-</i>		<i>1043</i>	
<i>EA3</i>					<i>-</i>	<i>11.03</i> <i>10.87</i>	<i>-</i>	<i>-</i>	<i>↓</i>	<i>1038</i>	

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

WATER SAMPLING DATA Well Name EA-1 Date 8/1/90 Time 1113
 Job Name Dublin Job Number 1-124.06 Initials DJF
WELL DATA: Well type _____ (M=monitoring well; Describe _____)
 Depth to Water 37.72 ft.
 Well Depth 10.88 ft. (spec.) Sounded Depth _____ ft.
 Well Diameter 4 in. Date _____ Time _____

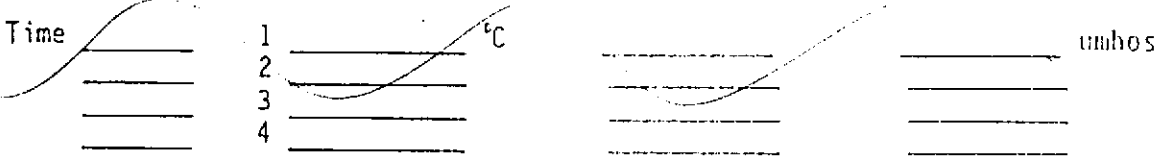
EVACUATION: Sampling Equipment:
 PVC Bailer: _____ in. Dedicated: Bladder Pump ; Bailer _____ gal.
 Sampling Port: Number _____ Rate _____ gpm. Volume _____ gal.
 Other _____
 Initial Height of Water in Casing 20.84 ft; Volume 17.52 gal.
 Volume To Be Evacuated = 52.6 gal. (initial volume x3 , x4 _____)

	Evacuated	Evacuated	Evacuated
Time: Stop	<u>1209</u>	_____	_____
Start	<u>1113</u>	_____	_____
Total minutes	<u>56</u>	_____	_____
Amount Evacuated	<u>85 53</u>	_____	_____
Total Evacuated	<u>52.0</u>	gal.	_____
Evacuation Rate	<u>.95</u>	gpm.	_____

Formulas / Conversions
 r = well radius in ft
 h = ht of water col in ft
 vol. of col. = $\pi r^2 h$
 7.48 gal/ft³
 V₁" casing = 0.163 gal/ft
 V₂" casing = 0.267 gal/ft
 V₃" casing = 0.453 gal/ft
 V₄" casing = 0.826 gal/ft
 V₅" casing = 1.47 gal/ft
 V₆" casing = 2.61 gal/ft

Depth to water during pumping 1248 ft. 1209 time
 Pumped dry? no After _____ gal. Recovery rate _____
 Depth to water for 80% recovery _____ ft.

CHEMICAL DATA: Temp. Probe # _____ Ph Probe # _____ Cond. Probe # _____



SAMPLING: Point of collection: PE Hose _____ ; End of bailer _____ ; Other _____
 Samples taken 1209 time Depth to water 1248 ft. Refrigerated:
 Sample description: Water color clear Odor none
 Sediment/Foreign matter _____

Sample ID no.	Container	Preservative	Analysis	Lab
<u>08010.01A</u> <u>40</u> ml	<u>VOA</u>	<u>HCl</u>	<u>EPA 602/8015</u>	<u>SAL</u>
<u>08010.01B</u> <u>40</u> ml	<u>↓</u>	<u>HCl</u>	<u>EPA 602/8015</u>	<u>SAL</u>
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____

Container codes: P = plastic bottle; C or B = clear/brown glass; Describe _____

COMMENTS: _____

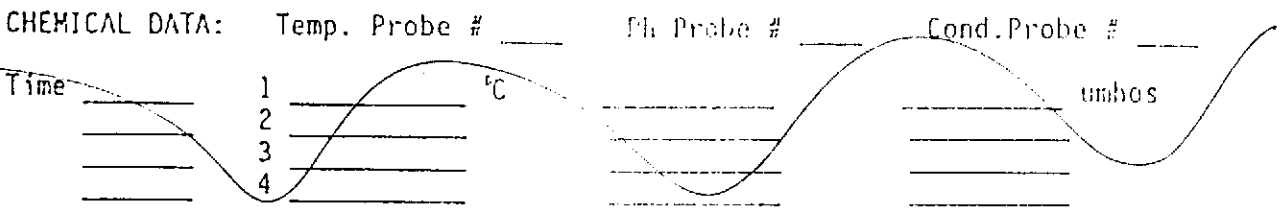
WATER SAMPLING DATA Well Name EA-2 Date 8-1-90 Time 12:00
 Job Name DUALIN Job Number 1-124,06 Initials M.B.G.
WELL DATA: Well type M (M=monitoring well; Describe _____)
 Depth to Water 9.71 ft.
 Well Depth 38.33 ft. (spec.) Sounded Depth _____ ft.
 Well Diameter 4 in. Date _____ Time _____

EVACUATION: Sampling Equipment:
 PVC Bailer: _____ in. Dedicated: Bladder Pump _____; Bailer _____
 Sampling Port: Number _____ Rate _____ gpm. Volume _____ gal.
 Other _____
 Initial Height of Water in Casing 28.62 ft; Volume 18.7 gal.
 Volume To Be Evacuated = 56.1 gal. (initial volume x3 X, x4 _____)

	Evacuated	Evacuated	Evacuated
Time: Stop	<u>1219</u>	<u>1305</u>	_____
Start	<u>1212</u>	<u>1321</u>	_____
Total minutes	<u>7</u>	<u>14</u>	_____
Amount Evacuated	<u>5</u>	<u>54</u>	_____
Total Evacuated	<u>59.0</u> gal.		
Evacuation Rate	<u>416</u> gpm.		

Formulas / Conversions
 r = well radius in ft
 h = ht of water col in ft
 vol. of col. = $\pi r^2 h$
 7.48 gal/ft³
 V₁" casing = 0.163 gal/ft
 V₂" casing = 0.367 gal/ft
 V₃" casing = 0.653 gal/ft
 V₄" casing = 0.826 gal/ft
 V₅" casing = 1.47 gal/ft
 V₆" casing = 2.61 gal/ft

Depth to water during pumping 15.32 ft. 13:05 time
 Pumped dry? NO After _____ gal Recovery rate _____
 Depth to water for 80% recovery _____ ft.



SAMPLING: Point of collection: PE hose ✓; End of bailer _____; Other _____
 Samples taken 1305 time Depth to water 15.32 ft. Refrigerated: ✓
 Sample description: Water color CLEAR Odor NONE
 Sediment/Foreign matter NONE

Sample ID no.	Container	Preservative	Analysis	Lab
<u>02A 40 ml</u>	<u>NOA</u> / other _____	<u>HAL</u>	<u>EA 602 / 1015</u>	<u>S.A.L.</u>
<u>-02B ↓ ml</u>	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____

Container codes: P = plastic bottle; C or B = clear/brown glass; Describe _____

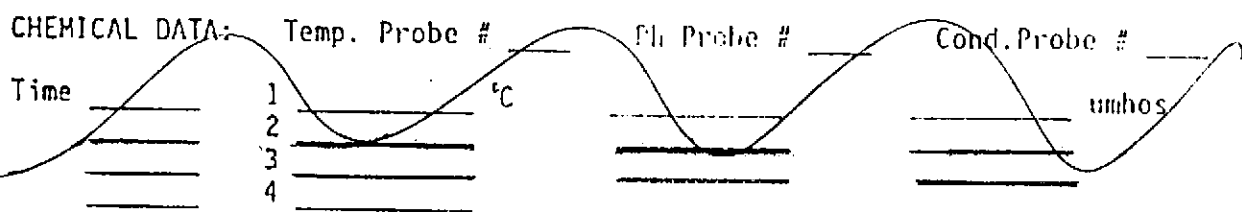
COMMENTS: _____

WATER SAMPLING DATA Well Name EA-3 Date 8-1-90 Time 11:00
 Job Name 1-134-6 Job Number D13610 Initials MSG
 WELL DATA: Well type M (M=monitoring well; Describe _____)
 Depth to Water 11.03 ft.
 Well Depth 33.44 ft. (spec.) Sounded Depth _____ ft.
 Well Diameter 4 in. Date _____ Time _____

EVACUATION: Sampling Equipment:
 PVC Bailer: _____ in. Dedicated: Bladder Pump ; Bailer
 Sampling Port: Number _____ Rate _____ gpm. Volume _____ gal.
 Other _____
 Initial Height of Water in Casing 22.81 ft; Volume 14.9 gal.
 Volume To Be Evacuated = 44.7 gal. (initial volume x3 , x4 _____)

	Evacuated	Evacuated	Evacuated	Formulas / Conversions r = well radius in ft h = ht of water col in ft vol. of col. = $\pi r^2 h$ 7.48 gal/ft ³ V ₁ " casing = 0.163 gal/ft V ₂ " casing = 0.367 gal/ft V ₃ " casing = 0.653 gal/ft V ₄ " casing = 0.826 gal/ft V ₅ " casing = 1.47 gal/ft V ₆ " casing = 2.61 gal/ft
Time: Stop	<u>1205</u>			
Start	<u>1107</u>			
Total minutes	<u>38</u>			
Amount Evacuated	<u>45.0</u>			
Total Evacuated	<u>45.0</u>	gal.		
Evacuation Rate	<u>.78</u>	gpm.		

Depth to water during pumping 13.80 ft. 1205 Time
 Pumped dry? NO After _____ gal. Recovery rate _____
 Depth to water for 80% recovery _____ ft.



SAMPLING: Point of collection: PE hose ; End of bailer _____; Other _____
 Samples taken 1205 time Depth to water 13.80 ft. Refrigerated:
 Sample description: Water color CLEAR Odor NONE
 Sediment/Foreign matter NONE

Sample ID no.	Container	Preservative	Analysis	Lab
<u>DE010-02A 40</u> ml	<u>VOA</u> / other	<u>HCL</u>	<u>FAH 602 / 12015</u>	<u>IA L.</u>
<u>.03B</u> ml	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____

Container codes: P = plastic bottle; C or B = clear/brown glass; Describe

COMMENTS: _____

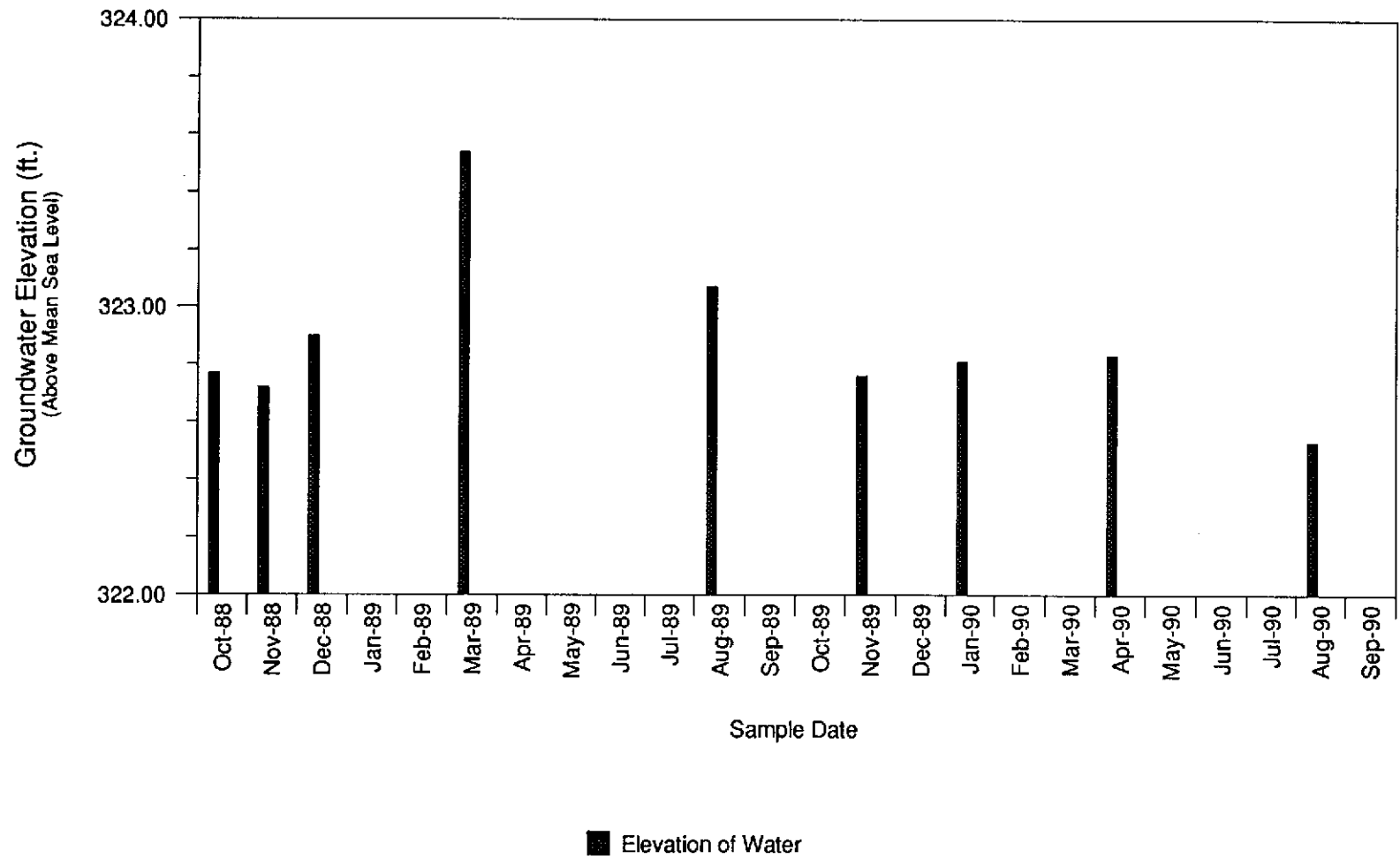


ATTACHMENT C

HYDROGRAPHS

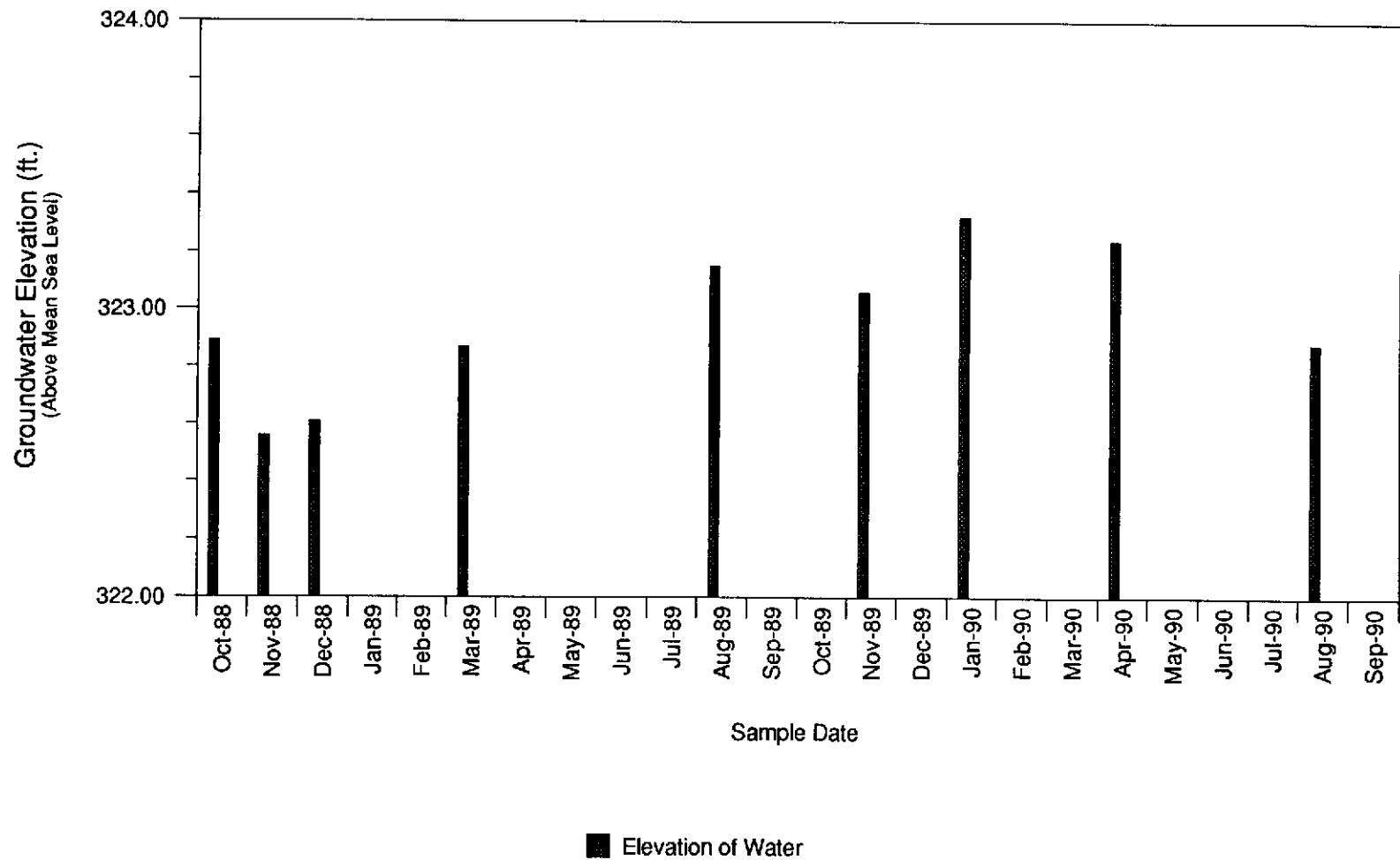
GROUNDWATER MONITOR WELL EA-1

Chevron Service Station #92582 Dublin, California



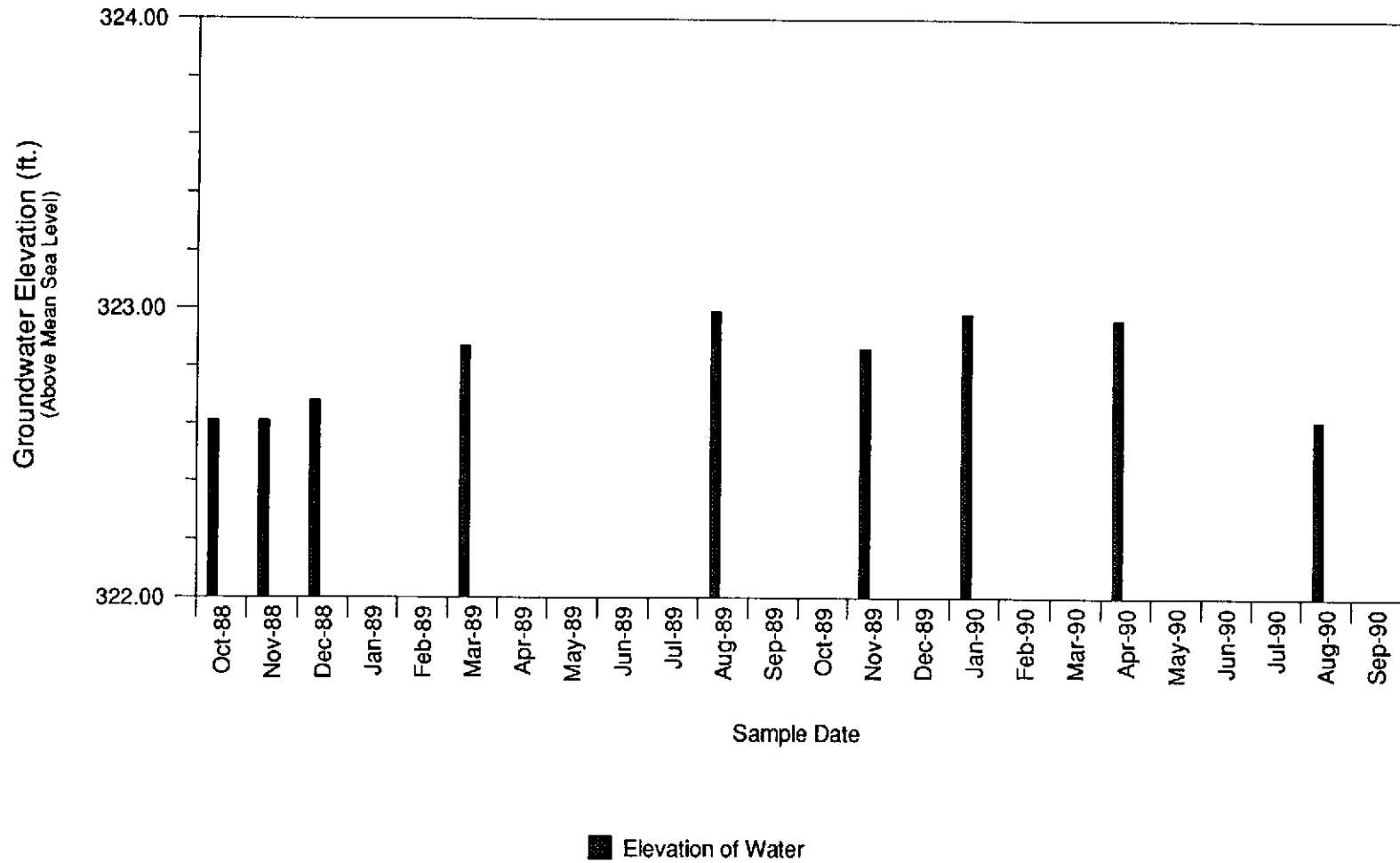
GROUNDWATER MONITOR WELL EA-2

Chevron Service Station #92582 Dublin, California



GROUNDWATER MONITOR WELL EA-3

Chevron Service Station #92582 Dublin, California





ATTACHMENT D
CHAIN-OF-CUSTODY FORM

Chain-of-Custody Record

<p>Chevron U.S.A. Inc. P.O. Box 5004 San Ramon, CA 94583 FAX (415) 842-9591</p>	Chevron Facility Number <u># 92582</u>	Chevron Contact (Name) <u>BOB FOXS</u>	
	Consultant Release Number _____	Consultant Project Number <u>1-124,06</u>	(Phone) <u>842-9040</u>
	Consultant Name <u>WGR INC.</u>	Address <u>2169 E. FRANCISCO BLVD #9 SAN RAFAEL CA</u>	Laboratory Name <u>SUPERIOR ANALYTICAL</u>
	Fax Number <u>415-457-8521</u>	Project Contact (Name) <u>ERIC STEVENSON</u>	Contract Number <u>2612 P00</u>
	(Phone) <u>457-7595</u>	Samples Collected by (Name) <u>M. GROSELOVE, D. FEASEY</u>	
		Collection Date <u>8-1-90</u>	
		Signature <u>[Signature]</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					
08010-01 AB		2	W		1209	HCl	X	X				X							
01010-02 AB		↓	↓		1205	↓	↓	↓				↓							
08010-03 AB		↓	↓		1205	↓	↓	↓				↓							
08010-04 AB		↓	↓		1230	↓	↓	↓				↓							

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>WGR INC.</u>	Date/Time <u>8/1/90 2:20 PM</u>	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs 48 Hrs 5 Days <u>10 Days</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization	Date/Time <u>8/1 2:20pm</u>	



ATTACHMENT E

**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.: 10868
 CLIENT: Western Geologic Resources
 CLIENT JOB NO.: 1-124.06

DATE RECEIVED: 08/01/90
 DATE REPORTED: 08/07/90

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
10868- 1	08010-01A,B	07/31/90	08/07/90
10868- 2	08010-02A,B	07/31/90	08/07/90
10868- 3	08010-03A,B	07/31/90	08/07/90
10868- 4	08010-04A,B	07/31/90	08/07/90

Laboratory Number:	10868 1	10868 2	10868 3	10868 4
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ANALYTE LIST	Amounts/Quantitation Limits (ug/l)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	300	ND<50	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	86	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	21	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	10	ND<0.5	ND<0.5	ND<0.5
XYLENES:	33	ND<0.5	ND<0.5	ND<0.5

OUTSTANDING QUALITY AND SERVICE

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

Page 2 of 2
QA/QC INFORMATION
SET: 10868

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

ug/L = part per billion (ppb)

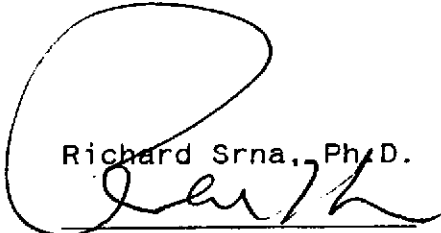
OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Duplicate RPD NA
Minimum Detection Limit in Water: 5000ug/L

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: 500ug/L
Daily Standard run at 2mg/L; %Diff Gasoline = <15
MS/MSD Average Recovery = 91%: Duplicate RPD = 5

8020/BTXE
Minimum Quantitation Limit in Water: 0.50ug/L
Daily Standard run at 20ug/L; %Diff = <15%
MS/MSD Average Recovery = 92%: Duplicate RPD = 5

Richard Srna, Ph.D.


Laboratory Director

OUTSTANDING QUALITY AND SERVICE