WESTERN GEOLOGIC RESOURCES, INC.

2169 E. FRANCISCO BOULEVARD, SUITE B
SAN RAFAEL, CALIFORNIA 94901
415/457-7595 FAX: 415/457-8521

30 October 1989

NOV 2 '89 H.C.H.

Robert Foss
Chevron USA
2410 Camino Ramon
San Ramon, CA 94583

Re: Quarterly Groundwater Sampling
Chevron Service Station #92582
7420 Dublin Boulevard
Dublin, California
WGR Job #1-124.05

Dear Mr. Foss:

This letter report presents the results of groundwater sampling performed on 2 August 1989 by Western Geologic Resources, Inc. (WGR) at the subject site, located at 7420 Dublin Boulevard near Village Parkway in Dublin, California (Figure 1, Figure 2).

The scope of work for this project was to:

1) Collect depth-to-water, depth-to-liquid hydrocarbons, liquid-hydrocarbon thickness, and well-casing volume measurements in all groundwater monitor wells and produce a potentiometric surface map based on the liquid-level measurements;

2) Collect groundwater samples from the wells for analyses of total purgeable petroleum hydrocarbons (TPPH), aromatic hydrocarbons including benzene, toluene, ethylbenzene, and total xylenes (BTEX), and halocarbons by EPA Method 8260;

3) Prepare a database for liquid-level measurements and groundwater chemistry data; and,

4) Review results and prepare a report of the investigation.

BACKGROUND

On 25 March 1988, EA Engineering, Science and Technology Inc. (EA) conducted a soil vapor survey at the Chevron service station. A total of 15 vapor points were installed and hydrocarbon vapors up to 9,700 parts-per-million by volume (ppmv) were detected near the west end of the former pump island location.

Subsequent to the soil vapor survey, EA drilled three exploratory soil borings and converted them to groundwater monitor wells. Well EA-1 was installed to the southwest of the pump islands. Wells EA-2 and EA-3 were installed to the east and the north of the underground fuel storage tanks, respectively. No information has been made available to WGR concerning the dates these wells were installed, nor any analytical data from soil samples that may have been collected.

On 17 October 1988, EA collected groundwater samples from all three wells. No TPPH or BTEX were detected in samples from well EA-1. Samples from wells EA-2 and EA-3 contained no detectable TPPH, but slight concentrations of BTEX were detected.

On 20 December 1988, groundwater samples were again collected by EA from all three wells. No liquid hydrocarbons were detected in any of the wells. No TPPH or BTEX were detected in samples from wells EA-1 and EA-2. However, samples from well EA-3 contained 240 parts-per-billion (ppb) TPPH, 90 ppb benzene, 1.2 ppb toluene, 13 ppb ethylbenzene, and 3.3 ppb total xylenes.

TPPH or BTEX were not detected in groundwater samples collected by EA on 28 March 1989 from wells EA-1 and EA-2. However, samples collected on the same date from well EA-3 contained 2,300 ppb TPPH, 380 ppb benzene, 130 ppb toluene, 240 ppb ethylbenzene, and 910 ppb total xylenes.

On 16 February 1989, three underground storage tanks were removed under the supervision of Blaine Tech Services, Inc. (BTS) of San Jose, California. BTS collected four native soil samples from the capillary zone in the underground storage tank excavation and collected a water sample from ponded water within the excavation. The soil and water samples were analyzed by Sequoia Analytical Laboratories by EPA Methods 8015 and 8020. The analytic results for the soil samples indicated concentrations of total petroleum hydrocarbons (TPH) ranging from 1.9 parts-per-million (ppm) to 29 ppm, respectively. The water sample contained low- to medium-boiling point hydrocarbons at 100,000 ppb. Based on the hydrocarbon concentrations in both the soil and water samples, WGR was contracted by Chevron to oversee further excavation and proper disposal of the excavated soil.

On 14 March 1989, WGR collected six samples from pea-gravel backfill material in the former underground storage tank excavation. Based on the hydrocarbon concentrations of the pea-gravel, it was excavated and separated into Class I and Class II stockpiles on 17 March 1989 (reference WGR report 12 April 1989). During the excavation of the pea gravel, 2,846 gallons of water that contained petroleum hydrocarbons were pumped out of the excavation by Erikson Trucking and disposed of at Gibson Oil in Bakersfield, California.

On 17 and 18 March 1989, five small-diameter soil borings (B-1 through B-5) were drilled by WGR staff in the vicinity of the former pump island locations. Soil samples were collected at depths ranging from 3 feet (ft) to 15.5 ft below grade. Analytic results of soil samples collected from these borings contained non-detectable to low concentrations of total petroleum hydrocarbons (TPH) and aromatic hydrocarbons. On the same date, nine sample locations, PS-1 through PS-9, were hand augered in the vicinity of former product-line locations, and soil samples collected at depths ranging from 2.5 ft to 10.5 ft below grade. Analytic results of soil samples collected from these locations indicated TPH concentrations ranging from 6.7 ppm to 750 ppm at two soil sample locations. These sample locations, PS-1 and PS-9, were on the north and south side of the southernmost pump island.

On 20 March 1989, approximately 18 cubic yards of Class I material were manifested and transported to Casmalia Resources, Inc., in Casmalia, California. On 20 March 1989, approximately 162 cubic yards were transported to McKittrick Landfill, a Class II landfill, in Bakersfield, California.

Because of the TPH concentrations detected in the soil samples PS-1 and PS-9, excavation and sampling were initiated by WGR in the vicinity of the southern pump island. A total of fourteen confirmatory soil samples were collected in the sidewalls of the excavation. The first round of soil samples were collected on 4 and 5 May 1989 and two samples, PS-12 and PS-14, collected at 6 ft and 9 ft below grade, respectively, contained TPH above 100 ppm.

Because soil samples PS-12 and PS-14 were above 100 ppm TPH, additional excavation was performed on 11 May 1989. Confirmatory soil samples were collected 10 ft below grade in the same sample locations and laboratory analysis indicated TPH concentrations of over 1,000 ppm.

On 23 May 1989, representatives from WGR and Chevron met with Gil Wistar, Hazardous Materials Specialist with the Alameda County Health Agency, to discuss the implementation of a soil vapor extraction system in the vicinity of the pump islands. As per conversation with Gil Wistar, the installation of a soil-vapor extraction system was approved. Due to limited access on the site, the excavation was terminated and all soil that was excavated was manifested and transported to Casmalia Resources, Inc., a Class I facility in Casmalia, California.

On 15 June 1989, WGR staff coordinated the installation of underground piping for a future soil-vapor extraction system near the pump islands and in the underground storage tank backfill. The potential vent system is intended to allow the removal of hydrocarbon contamination remaining in the inaccessible soils surrounding the vicinity of the pump islands and, if necessary, the tank backfill. A 10-inch diameter PVC casing was also installed in the tank backfill to allow for safe drilling within the backfill in the future. These systems were installed concurrent with the installation and backfilling of three new underground storage tanks and associated piping.

GROUNDWATER SAMPLING

Groundwater monitor wells EA-1, EA-2 and EA-3 were sampled on 2 August 1989 by WGR environmental technicians Elizabeth Adams and Dan Bockus. All three monitor wells were sampled according to WGR's standard operating procedure included as Attachment A. At least three well-casing volumes of groundwater were removed from each monitor well prior to sampling. Approximately 155 gallons of purged groundwater was stored temporarily on-site in 55-gallon drums pending results of laboratory analyses. Groundwater samples were collected using steam-cleaned PVC bailers. A grab sample was also collected from the water in the 10-inch diameter PVC casing in the underground fuel storage tank backfill. This casing is not a monitor well and was not purged or developed prior to sampling. There is no casing cap to prevent surface runoff from entering the casing; therefore, this sample may not be representative of the groundwater, but of standing water in the underground storage

tank backfill. No liquid hydrocarbon or odors were reported in any of the monitor wells. A strong odor, but no liquid hydrocarbons, was reported from the PVC backfill casing.

The groundwater samples and travel blank, made up of deionized water at the laboratory, were sent under chain-of-custody to Central Coast Analytical Services of San Luis Obispo, California for analysis.

ANALYTIC RESULTS

Groundwater samples from all wells were analyzed for the presence of TPPH, BTEX and halocarbons by EPA Method 8260. Analytic results are presented in Table 1. Chain-of-custody forms and laboratory reports are included as Attachments B and C, respectively.

TPPH, BTEX and halocarbons were not detected in the water samples collected from monitor wells EA-1, EA-2 and EA-3. The grab sample collected from the 10-inch diameter PVC tank backfill casing contained 110,000 ppb TPPH characterized as gasoline, 9,200 ppb benzene, 14,000 ppb toluene, 1,800 ppb ethylbenzene, 17,000 ppb total xylenes, and 50 ppb 1,2-dichloroethane (EDC). No TPPH, BTEX, or halocarbons were detected in the travel blank.

GROUNDWATER FLOW

Figure 3 is a potentiometric surface map of the shallow groundwater based on depth-to-water measurements taken on 2 August 1989. Liquid-level measurements are presented in Table 2. Hydrographs are included in Attachment D. Depth-to-groundwater for the three monitor wells was measured by WGR prior to groundwater sampling on 2 August 1989 and varied from 9.44 ft to 10.65 ft below grade. Groundwater at the site was estimated to flow to the northwest at a gradient of approximately 0.34%. Groundwater elevations indicate that well EA-2 is upgradient of, well EA-1 is crossgradient to, and well EA-3 is downgradient of, respectively, the former underground fuel tanks.

TRENDS

TPPH concentrations in groundwater samples collected from well EA-3 decreased from 2,300 ppb in March 1989, when sampled by EA, to below detection limits in August 1989 when sampled by WGR. BTEX concentrations in samples collected from well EA-3 also decreased to below detection limits during the same time period. As in the March 1989 sampling, TPPH and BTEX were not detected in samples collected from EA-1 and EA-2.

Groundwater flow directions and gradients for sampling periods prior to August 1989 were estimated by WGR from groundwater elevation data obtained by EA. The estimated direction of

groundwater flow for October 1988 was to the northwest at a gradient of approximately 0.62%. The direction of groundwater flow shifted to the east during November 1988 and the gradient decreased to 0.14%. The direction of groundwater flow remained to the east during December 1988, with the gradient increasing to 0.24%. The direction of flow shifted to the northeast during March 1989 and the gradient increased significantly to 2%. The direction of flow remained to the northwest during August 1989, but the gradient significantly decreased to 0.34%.

SUMMARY

Groundwater monitor wells EA-1, EA-2 and EA-3 were sampled by WGR on 2 August 1989. TPPH, aromatic hydrocarbons, or halocarbons were not detected in any of the monitor wells. In addition, a water sample was collected from a 10-inch diameter PVC casing installed within the underground fuel tank backfill. The sample contained TPPH at 110,000 ppb, benzene at 9,200 ppb, toluene at 14,000 ppb, ethylbenzene at 1,800 ppb, total xylenes at 17,000 ppb, and 50 ppb EDC. Liquid hydrocarbons were not detected in any of the three monitor wells sampled.

TPPH and BTEX concentrations in groundwater samples collected from EA-3 have decreased to below detection limits as compared to the March 1989 water sampling performed by EA. The estimated direction of groundwater flow is to the northwest with a gentle gradient of 0.34%.

Quarterly monitoring and groundwater sampling will continue in order to evaluate variations in petroleum hydrocarbon concentrations and to determine the direction of groundwater flow beneath the site.

Western Geologic Resources, Inc. is pleased to conduct hydrogeologic and environmental consulting services for Chevron and trust that this report will meet your needs. Please call us at (415) 457-7595 if you have any questions.

Sincerely,
Western Geologic Resources, Inc.

Leonard P. Niles
Senior Staff Geologist

Lee A. Otis
Project Hydrogeologist

John E. Crawford
Principal Geologist/Operations Manager
CRG No. 2635 Exp. 6-30-90

REGISTERED GEOLOGIST
JOHN E. CRAWFORD
No. 002635
STATE OF CALIFORNIA

124L1OC9

dms/LPN/LAO/JEC

Figures

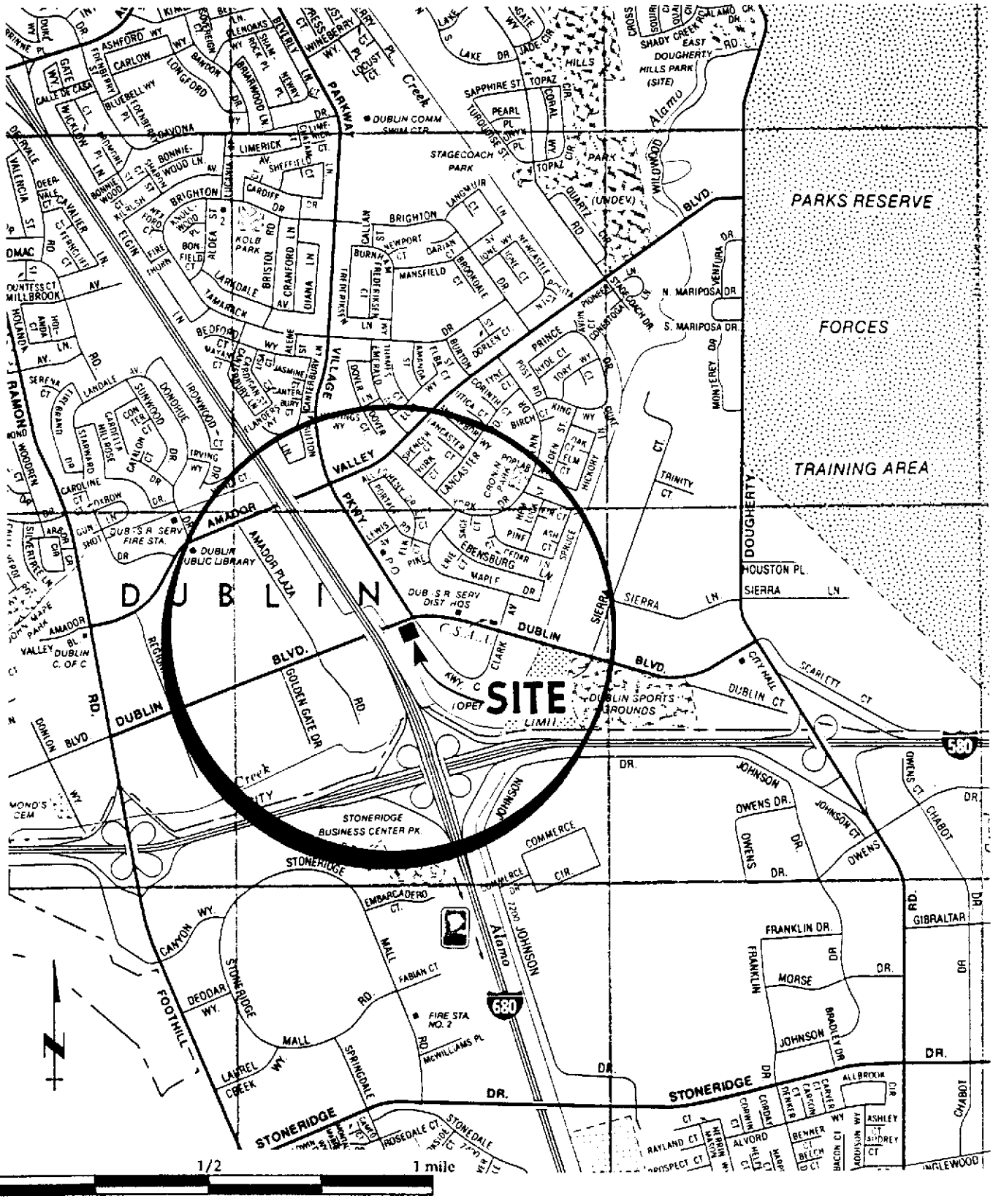
1. Site Location Map
2. Vicinity Map
3. Potentiometric Surface of the Shallow Groundwater: 2 August 1989

Tables

1. Analytic Results: Groundwater Samples
2. Liquid Level Measurements

Attachments

A. Standard Operating Procedure
B. Chain-of-Custody Forms
C. Laboratory Reports
D. Hydrographs

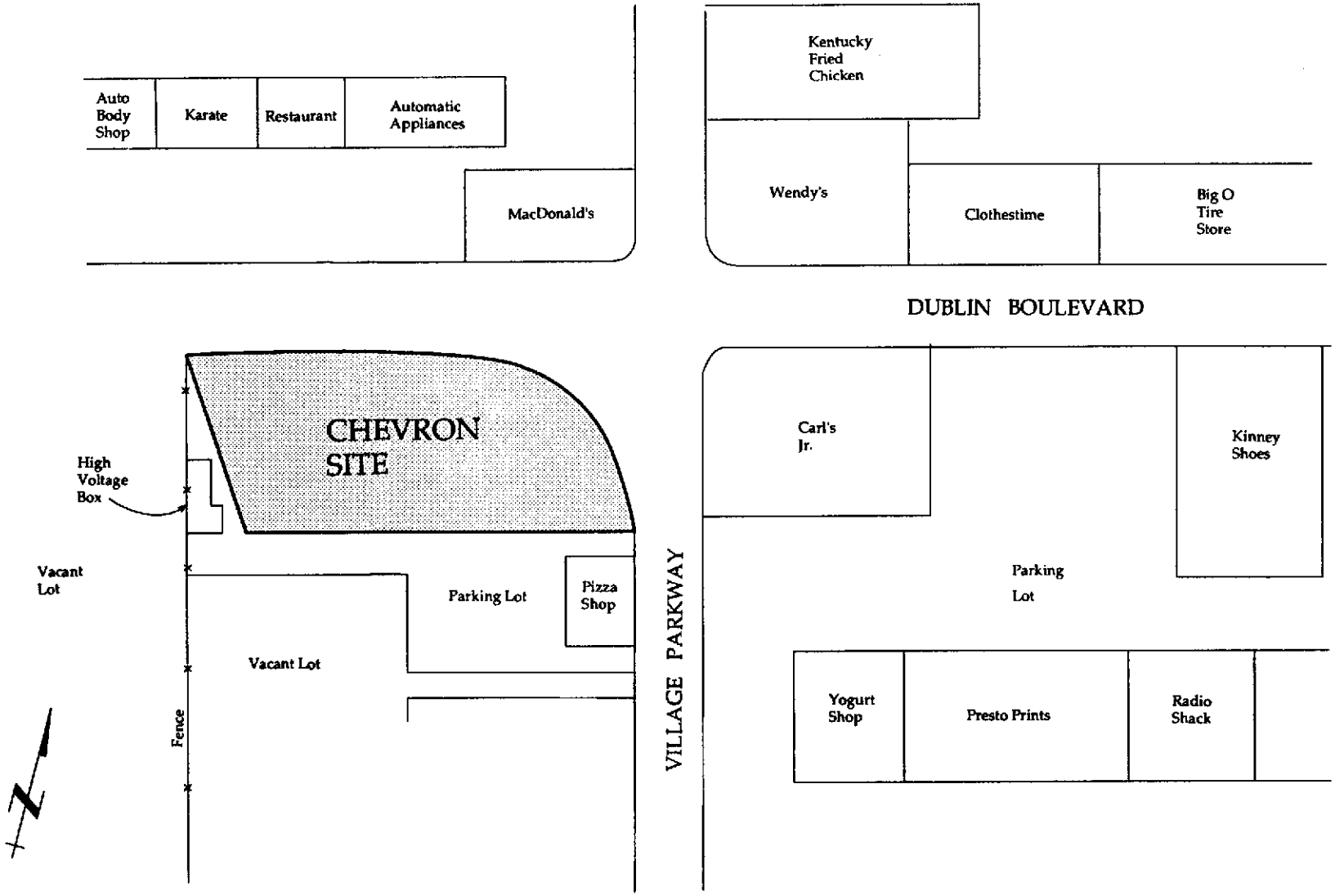


Site Location Map
Chevron Service Station #92582
Dublin, California

FIGURE
1

WESTERN GEOLOGIC RESOURCES, INC.

1-124.05



NOT TO SCALE

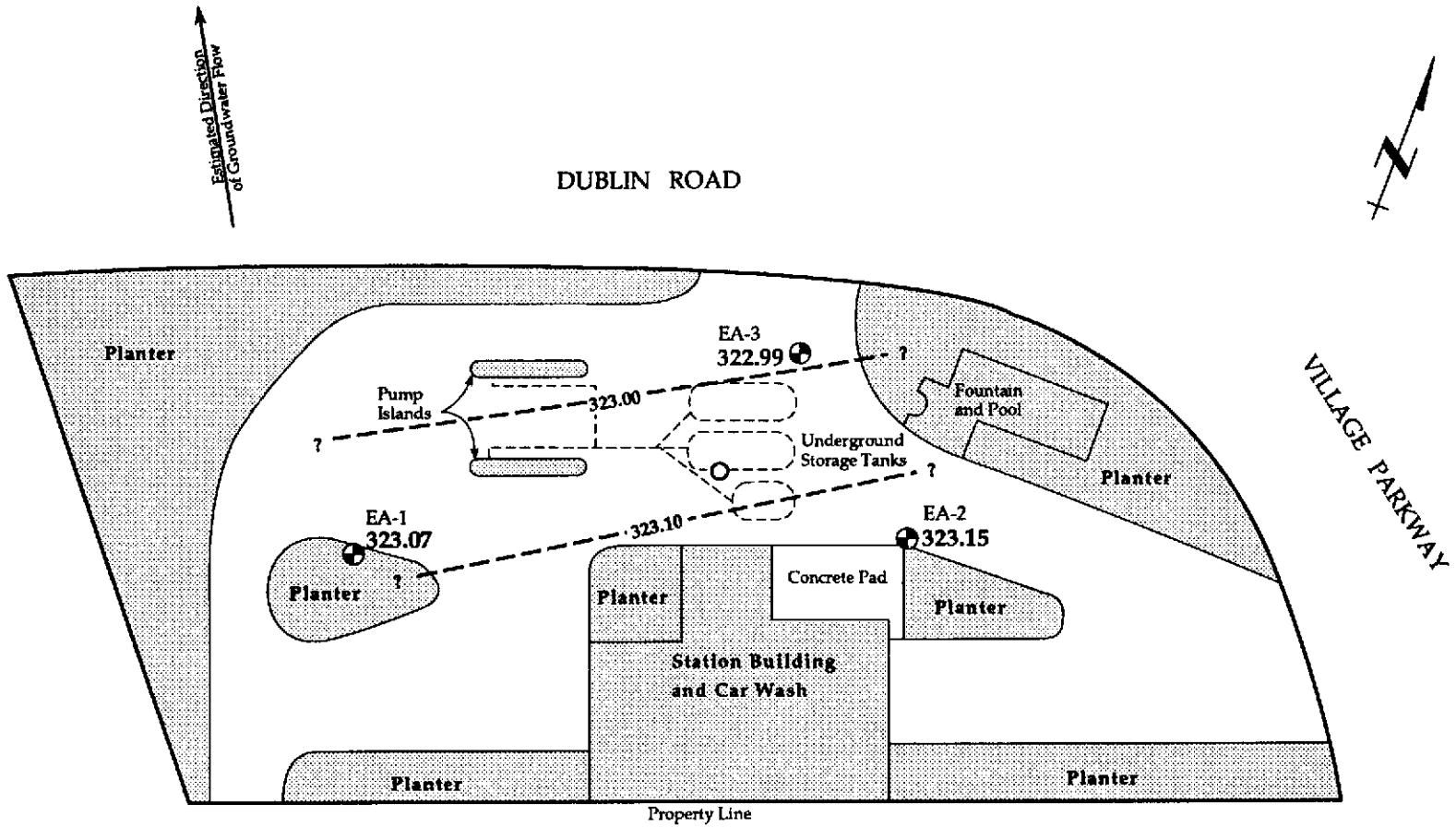
Vicinity Map
Chevron SS# 92582, Dublin, California

October, 1989

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-124.05



LEGEND

EA-1 323.07	Groundwater Monitor Well and Groundwater Elevation, feet above mean sea level
O	10" Diameter PVC Casing
323.10 — — — ?	Groundwater Elevation Contour, feet above mean sea level, dashed where inferred, queried where uncertain

Potentiometric Surface of the Shallow Groundwater
2 August 1989, Chevron SS# 92582, Dublin, California

October 1989

FIGURE 3

WESTERN GEOLOGIC RESOURCES, INC.

1-124.05

TABLE 1. ANALYTIC RESULTS: GROUNDWATER SAMPLES
Chevron Station #92582
Dublin, California

Well ID #	Date	Lab	EPA Method	TPPH	FC	Benzene	Toluene	E-Benz	Xylenes	EDC
				<----------ppb---------->						
EA-1	17 Oct 88*	NA	NA	<50.0	---	<0.5	<0.5	<0.5	<0.5	---
EA-1	20 Dec 88*	PL	8015/8020	<50.0	---	<0.5	<0.5	<0.5	<0.5	---
EA-1	28 Mar 89*	PL	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-2	17 Oct 88*	NA	NA	<50.0	---	<0.5	<0.5	<0.5	1.2	---
EA-2	20 Dec 88*	PL	8015/8020	<50.0	---	<0.5	<0.5	<0.5	<0.5	---
EA-2	28 Mar 89*	PL	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-3	17 Oct 88*	NA	NA	<50.0	---	1.8	<0.5	<0.5	3.0	---
EA-3	20 Dec 88*	PL	8015/8020	240	Gas	90.0	1.2	13.0	3.3	---
EA-3	28 Mar 89*	PL	8015/8020	2300	Gas	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
10" PVC CASING	2 Aug 89	CCAS	8260	100,000	Gas	8,700	14,000	1,700	17,000	50
10" PVC CASING Duplicate	2 Aug 89	CCAS	8260	110,000	Gas	9,200	14,000	1,800	13,000	50
EB	28 Mar 89*	PL	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

Notes:
TPPH = Total Purgeable Petroleum Hydrocarbons
FC = Fuel Characteristics
E-Benz = Ethylbenzene
EDC = 1,2-Dichloroethane
ppb = Parts-Per-Billion
* = Sample collected by EA Engineering, Science and Technology, Inc.
PL = Pace Laboratories, Inc.
CCAS = Central Coast Analytical Services, Inc.
EB = Equipment Blank
TB = Travel Blank
Gas = Gasoline
< = Less than indicated detection limit
NA = Not Available
--- = Not Analyzed/Not Applicable

TABLE 2. LIQUID LEVEL MEASUREMENTS
Chevron Station #92582
Dublin, California

Well ID #	Date	DTLH	DTW	LHT	TOC*	Elev-LH	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-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-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
10" PVC CASING	2 Aug 89	---	9.83	---	NA	---	---

Notes:
* = Data obtained by EA Engineering, Science, and Technology, Inc.
DTLH = Depth-to-Liquid Hydrocarbon
DTW = Depth-to-Water
TOC = Top-of-Casing Elevation
Elev-LH = Elevation of Liquid Hydrocarbons
Elev-W = Elevation of Water
NA = Not Available
--- = Not Measured

ATTACHMENT A

STANDARD OPERATING PROCEDURES

STANDARD OPERATING PROCEDURES
RE: SOIL SAMPLING
SOP-2

Soil samples for chemical analysis are collected in thin-walled brass tubes, 4-inches long by 2-inches outside diameter. Four of these tubes and a spacer tube are set in a 2-inch inside diameter 18-inch split-barrel sampler.

The split-barrel sampler is driven its entire length either hydraulically or using a 140-pound drop hammer. The sampler is extracted from the borehole and the brass tubes, containing the soil samples, are removed. Upon removal from the sampler, the selected brass tubes are immediately trimmed and capped with aluminum foil and plastic caps. They are then hermetically sealed with duct tape, labeled and refrigerated for delivery, under chain-of-custody, to the analytic laboratory. These procedures minimize the potential for cross-contamination and volatilization of volatile organic compounds (VOC) prior to chemical analysis.

One soil sample collected at each sampling interval is analyzed in the field using either a photoionization detector (PID), a flame ionization detector (FID), or an explosimeter. The purpose of this field analysis is to qualitatively determine the presence or absence of hydrocarbons and to establish which soil samples will be analyzed at the laboratory. The soil sample is sealed in a zip-lock plastic bag and placed in the sun to enhance volatilization of the hydrocarbons from the sample. The data is recorded on the drill logs at the depth corresponding to the sampling point.

Other soil samples are collected to document the stratigraphy and estimate relative permeability of the subsurface materials. All drilling and sampling equipment are steam-cleaned prior to use at each site and between boreholes to minimize the potential for cross-contamination.

STANDARD OPERATING PROCEDURES
RE: HOLLOW-STEM AUGER MONITOR WELL INSTALLATION AND DEVELOPMENT
SOP-3

The boreholes for monitor wells are drilled using a truck-mounted hollow-stem auger drill rig. The outside diameter (OD) of the borehole will be a minimum of two inches larger than the casing OD when installing 4-inch well screen. The hollow-stem auger provides minimal interruption of drilling while permitting soil sampling at desired intervals. Soil samples are collected by hammering a conventional split-barrel sampler containing pre-cleaned 2-inch brass sample tubes. A geologist from Western Geologic Resources continuously logs each borehole during drilling and constantly checks drill cuttings for odors. The sampler is rinsed between samples and steam-cleaned with all other drilling equipment between borings to prevent cross-contamination.

Monitor wells are cased with threaded, factory-perforated and blank Schedule 40 PVC. The perforated interval consists of slotted casing, generally 0.020-inch wide by 1.5-inch long slot size, with 42 slots per foot. A PVC cap is fastened to the bottom of the casing with stainless steel screws; no solvents or cements are used. Centering devices may be fastened to the casing to assure even distribution of filter material and grout within the borehole annulus. The well casing is thoroughly washed and steam-cleaned prior to installation.

After setting the casing inside the hollow stem, sand or gravel filter material is poured into the annular space to fill from the bottom of the boring to 1 foot above the perforated interval. A 1- to 2-foot thick bentonite plug is placed above this filter material to prevent grout from infiltrating down into the filter material. Neat cement, containing about 5% bentonite, is then tremied into the annular space from the top of the bentonite plug to the surface. A lockable PVC cap is placed on each wellhead. Traffic-rated Christy boxes are installed around the wellhead for wells in parking lots and driveways while steel stove pipes are usually set over wellheads in landscaped areas.

After installation, the wells are thoroughly developed to remove residual drilling materials from the wellbore, and to improve well performance by removing any fine material in the filter pack that can pass from the formation into the well. Well development techniques used include pumping, bailing, surging, swabbing, jetting, flushing, and airlifting. All development water is collected in 55-gallon drums for temporary storage, and is then disposed of properly depending on analytic results. To assure that cross-contamination does not occur between wells during drilling and development, all development equipment is steam-cleaned.

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 for each well. This sample is held at the laboratory unless needed. 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.

CHAIN OF CUSTODY

WESTERN GEOLOGIC RESOURCES, INC.
2169 E. Francisco Boulevard, Suite B
San Rafael, California 94901
415/457-7595 Fax: 415/457-8521

General Remarks

Laboratory: Central Coast Analytical | Log #:

Address: 141 Suburban Rd. Suite C-4, San Luis Obispo, CA. 93401

Project #: 1-124.05 | Project Name: Dublin | Project Mgr/Contact: Lee OTis

Sampler(s): Liz Adams / Daniel Bockus

Analyses Requested: Fuel Fingerprint; Turn Around Required See expl 3

Lab Sample Number	Date Sampled	Sample Type See expl 1	Container Type See expl 2	Preservative	Sample Description	Number of Containers	Fuel Fingerprint	Remarks
10,183	8/2/89	GW	V	Azide	12401 A,B	2	X	
10,184	↓	↓	↓	↓	12402 A,B	↓	↓	
10185					12403 A,B			
10186	↓	↓			12404 A,B			
10187		AQ	↓	↓	124TB	↓	↓	

Sample Relinquished By	Date/Time	Received By	Date/Time
Daniel Bockus	8/2/89 1700	[illegible] iced/intact cold Sealed	8-3-89 1020

Explanation

1 SO–Soil, NA–Nonaqueous, GW–Groundwater, SL–Sludge, PE–Petroleum, VP–Vapor, AQ–Aqueous, OT–Other

2 T–Brass Tube, P–Plastic Bottle, V–VOA Bottle, B–Bag, G–Glass Bottle, OT–Other

3 N–Normal (2wks), W–1 Wk, R–24 hr Rush, H–Hold

Central Coast Analytical Services

Central Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 934Ø1
(8Ø5) 543-2553

Lab Number: F-1Ø183
Collected: Ø8/Ø2/89
Received: Ø8/Ø3/89
Tested: Ø8/Ø4/89
Collected by: Adams/Bockus

Fuel Fingerprint Analysis - EPA Method 826Ø

EXTRACTED BY EPA METHOD 5Ø3Ø (purge-and-trap)

ATTN: Lee Otis
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 949Ø1

SAMPLE DESCRIPTION:
Project #1-124.Ø5, 124Ø1 A/B, Water

Compound Analyzed	Detection Limit in ppb (PQL)*	Concentration in ppb
Benzene	Ø.1	not found
Toluene	1.	not found
Ethylbenzene	1.	not found
Xylenes	1.	not found
1,2-Dichloroethane (EDC)	Ø.1	not found
Ethylene Dibromide (EDB)	Ø.1	not found
TOTAL PURGEABLE PETROLEUM HYDROCARBONS (GASOLINE)	5Ø.	<5Ø.
BTX as a Percent of Fuel		not applicable
Percent Surrogate Recovery		1Ø6.

*(Practical Quantitation Limit)

Respectfully submitted,
CENTRAL COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.
President

MSD#6
Ø8-Ø9-89
F1Ø183f.wr1/122
MH/jm/ck/rh

Central Coast Analytical Services

Central Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number: F-10184
Collected: 08/02/89
Received: 08/03/89
Tested: 08/04/89
Collected by: Adams/Bockus

Fuel Fingerprint Analysis - EPA Method 8260
EXTRACTED BY EPA METHOD 5030 (purge-and-trap)

ATTN: Lee Otis
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

SAMPLE DESCRIPTION:
Project #1-124.05, 1242 A/B, Water

Compound Analyzed	Detection Limit in ppb (PQL)*	Concentration in ppb
Benzene	0.1	not found
Toluene	1.	not found
Ethylbenzene	1.	not found
Xylenes	1.	not found
1,2-Dichloroethane (EDC)	0.1	not found
Ethylene Dibromide (EDB)	0.1	not found
TOTAL PURGEABLE PETROLEUM HYDROCARBONS (GASOLINE)	50.	<50.
BTX as a Percent of Fuel		not applicable
Percent Surrogate Recovery		120.

*(Practical Quantitation Limit)

Respectfully submitted,
CENTRAL COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.
President

MSD#6
08-09-89
F10184f.wr1/122
MH/jl/ck/rh

Central Coast Analytical Services

Central Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number: F-10185
Collected: 08/02/89
Received: 08/03/89
Tested: 08/04/89
Collected by: Adams/Bockus

Fuel Fingerprint Analysis - EPA Method 8260
EXTRACTED BY EPA METHOD 5030 (purge-and-trap)

ATTN: Lee Otis
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

SAMPLE DESCRIPTION:
Project #1-124.05, 1203 A/B, Water

Compound Analyzed	Detection Limit in ppb (PQL)*	Concentration in ppb
Benzene	0.1	not found
Toluene	1.	not found
Ethylbenzene	1.	not found
Xylenes	1.	not found
1,2-Dichloroethane (EDC)	0.1	not found
Ethylene Dibromide (EDB)	0.1	not found
TOTAL PURGEABLE PETROLEUM HYDROCARBONS (GASOLINE)	50.	<50.
BTX as a Percent of Fuel		not applicable
Percent Surrogate Recovery		107.

*(Practical Quantitation Limit)

Respectfully submitted,
CENTRAL COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.
President

MSD#6
08-09-89
F10185f.wr1/122
MH/jl/ck/rh

Central Coast Analytical Services

Central Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 934Ø1
(8Ø5) 543-2553

Lab Number: F-1Ø186
Collected: Ø8/Ø2/89
Received: Ø8/Ø3/89
Tested: Ø8/Ø4/89
Collected by: Adams/Bockus

Fuel Fingerprint Analysis - EPA Method 826Ø
EXTRACTED BY EPA METHOD 5Ø3Ø (purge-and-trap)

ATTN: Lee Otis
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 949Ø1

SAMPLE DESCRIPTION:
Project #1-124.Ø5, 124Ø4 A/B, Water

Compound Analyzed	Detection Limit in ppb (PQL)*	Concentration in ppb
Benzene	5Ø.	87ØØ.
Toluene	5Ø.	14ØØØ.
Ethylbenzene	5Ø.	17ØØ.
Xylenes	5Ø.	17ØØØ.
1,2-Dichloroethane (EDC)	5Ø.	5Ø.
Ethylene Dibromide (EDB)	5Ø.	not found
TOTAL PURGEABLE PETROLEUM HYDROCARBONS (GASOLINE)	5ØØØ.	1ØØØØØ.
BTX as a Percent of Fuel		4Ø.
Percent Surrogate Recovery		111.

*(Practical Quantitation Limit)

Respectfully submitted,
CENTRAL COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.
President

MSD#6
Ø8-Ø9-89
F1Ø186f.wr1/122
MH/jl/ck/rh

Central Coast Analytical Services

Central Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number: F-10186dup
Collected: 08/02/89
Received: 08/03/89
Tested: 08/04/89
Collected by: Adams/Bockus

Fuel Fingerprint Analysis - EPA Method 8260
EXTRACTED BY EPA METHOD 5030 (purge-and-trap)

ATTN: Lee Otis
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

SAMPLE DESCRIPTION:
Project #1-124.05, 1204 A/B, Water
Duplicate Analysis

Compound Analyzed	Detection Limit in ppb (PQL)*	Concentration in ppb
Benzene	50.	9200.
Toluene	50.	14000.
Ethylbenzene	50.	1800.
Xylenes	50.	13000.
1,2-Dichloroethane (EDC)	50.	50.
Ethylene Dibromide (EDB)	50.	not found
TOTAL PURGEABLE PETROLEUM HYDROCARBONS (GASOLINE)	5000.	110000.
BTX as a Percent of Fuel		33.
Percent Surrogate Recovery		110.

*(Practical Quantitation Limit)

Respectfully submitted,
CENTRAL COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.
President

MSD#6
08-09-89
F10186fd.wr1/122
MH/jl/ck/rh

Central Coast Analytical Services

Central Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number: F-10187
Collected: 07/28/89
Received: 08/03/89
Tested: 08/04/89
Collected by: JO of CCAS

Fuel Fingerprint Analysis - EPA Method 8260
EXTRACTED BY EPA METHOD 5030 (purge-and-trap)

ATTN: Lee Otis
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

SAMPLE DESCRIPTION:
Project #1-124.05, 124TB A/B
TB072889J016, Water

Compound Analyzed	Detection Limit in ppb (PQL)*	Concentration in ppb
Benzene	0.1	not found
Toluene	1.	not found
Ethylbenzene	1.	not found
Xylenes	1.	not found
1,2-Dichloroethane (EDC)	0.1	not found
Ethylene Dibromide (EDB)	0.1	not found
TOTAL PURGEABLE PETROLEUM HYDROCARBONS (GASOLINE)	50.	<50.
BTX as a Percent of Fuel		not applicable
Percent Surrogate Recovery		106.

*(Practical Quantitation Limit)

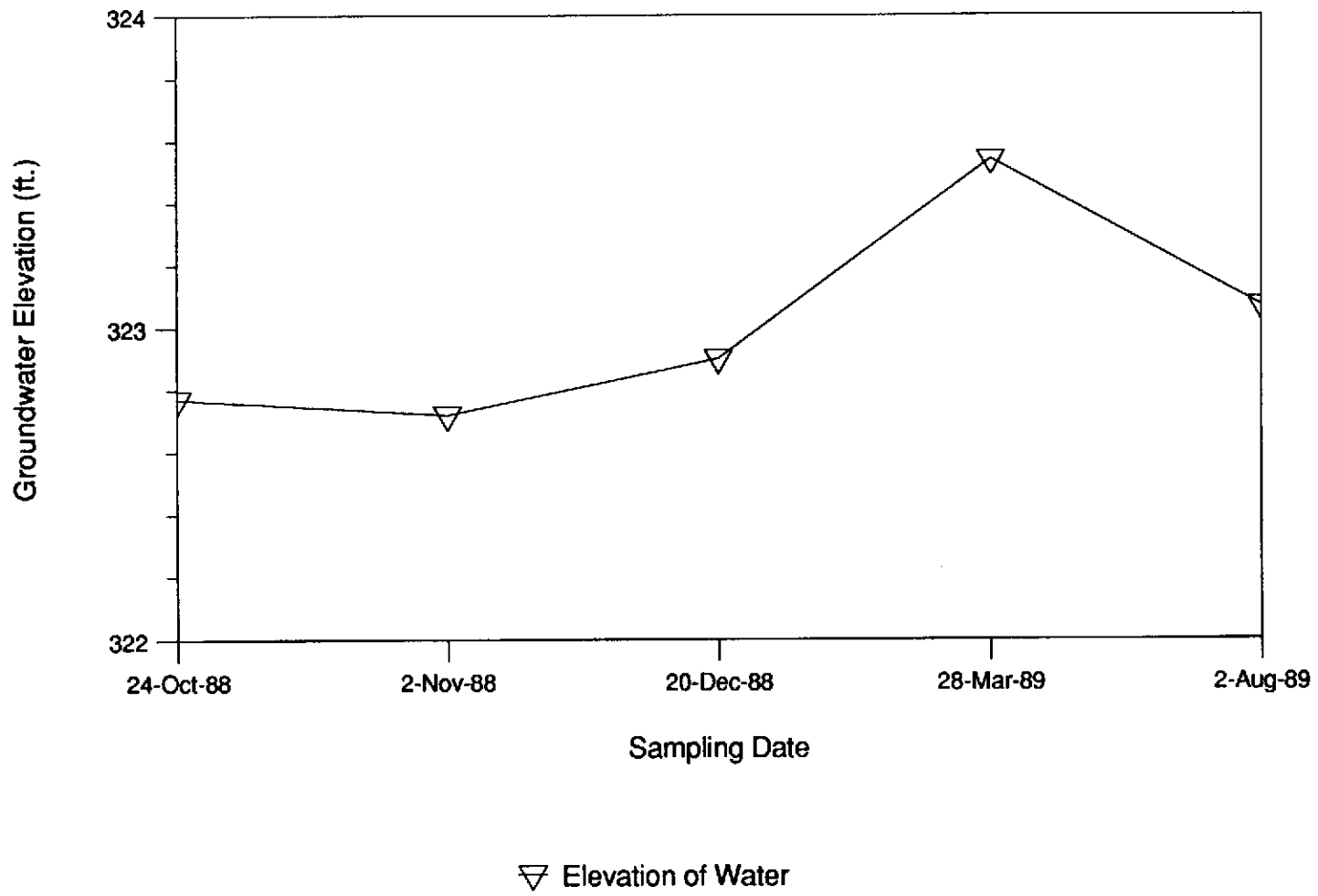
Respectfully submitted,
CENTRAL COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.
President

MSD#6
08-09-89
F10187f.wr1/122
MH/jl/ck/rh

GROUNDWATER MONITOR WELL EA-1

Chevron Service Station #92582 Dublin, California

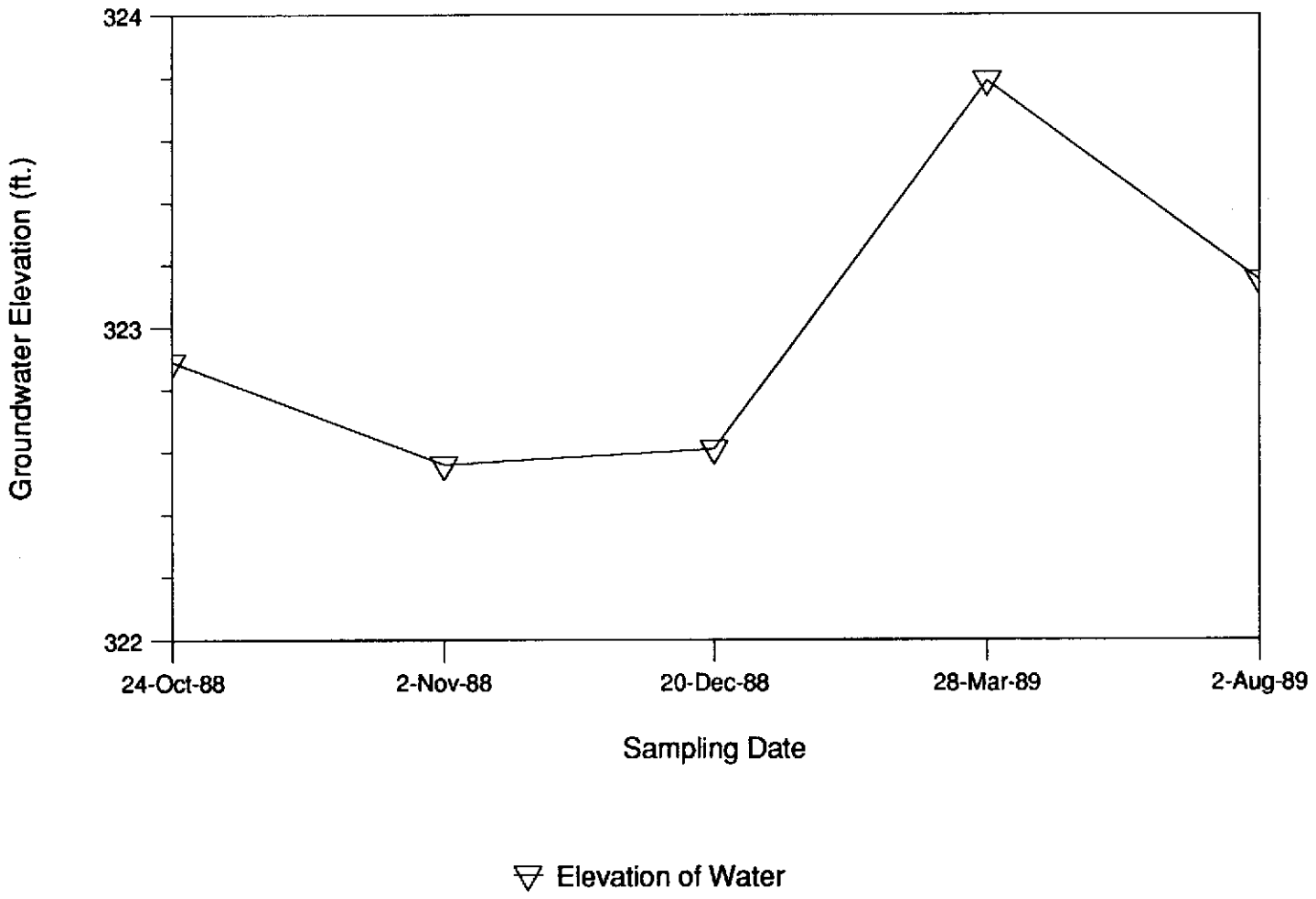


WGR #1-124.05

WESTERN GEOLOGIC RESOURCES, INC.

GROUNDWATER MONITOR WELL EA-2

Chevron Service Station #92582 Dublin, California

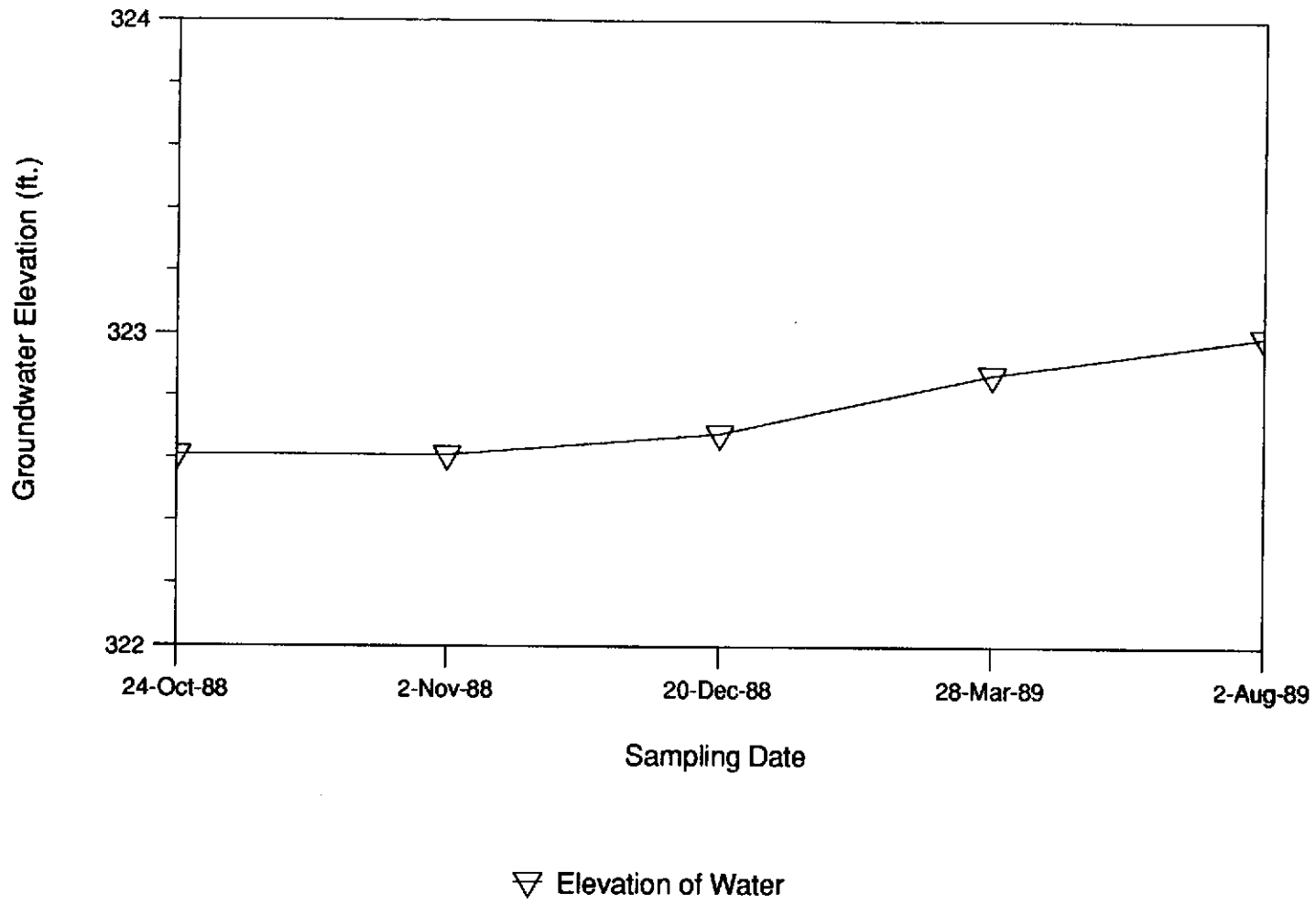


WGR #1-124.05

WESTERN GEOLOGIC RESOURCES, INC.

GROUNDWATER MONITOR WELL EA-3

Chevron Service Station #92582 Dublin, California



WGR #1-124.05

WESTERN GEOLOGIC RESOURCES, INC.