EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

K. G. HUFFMAN

Western Regional Operations
41 Lafayette Circle
Lafayette, California 94549
(415) 283-7077

FEB 24 REC'D

23 February 1989

Bob Foss
Chevron U.S.A. Inc.
2410 Camino Ramon
P.O. Box 5004
San Ramon, California 94583-0804

RE: Quarterly sampling at former Chevron SS 9-2582, 7240 Dublin Boulevard, Dublin, California, Results for January 1989

Dear Bob:

Please find enclosed a brief summary of the quarterly sampling at former Chevron SS 9-2582, located at 7240 Dublin Boulevard, Dublin, California. The summary includes three tables, one figure, and the analytical results from Pace Laboratories.

Three ground-water monitoring wells were sampled on 20 December 1988 as requested. The sampling method follows EA's protocol for sampling: after the well volumes were calculated by gauging the depth to water, 2.5 to 3.3 volumes of water were purged from each well with clean PVC bailers; water was purged until pH, temperature, and conductivity had stabilized for three consecutive bailer volumes; the wells did not purge dry but did recharge slowly; the water was then sampled with clean Teflon bailers and poured into 40 ml VOA vials which were labeled, and stored on ice. The samples of ground water were submitted for analysis under chain-of-custody to Pace Laboratories. The samples were analyzed for total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylenes (BTE&X) by modified EPA Method 8015. The analytical results for 20 December 1988 are attached as Table 1. The analytical results from 20 December 1988 are compared and summarized with the results from 17 October 1988 in Table 2.

No free product was detected in any of the wells. The samples of ground water from monitoring wells EA1 and EA2 do not contain concentrations of dissolved hydrocarbons greater than the detection limit of 0.0005 mg/L; xylenes at a concentration of 0.0012 mg/L were detected in samples from EA2 on 17 October 1988 but were not measured in December. The samples of ground water from EA3

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contain low levels of dissolved hydrocarbons: the concentrations of benzene in EA3 have increased from 0.0018 mg/L to 0.090 mg/L in three months; this increase is accompanied by an increase in total petroleum hydrocarbons from less than the detection limit of 0.050 mg/L to 0.240 mg/L in the same period.

The ground water will be sampled again in March and in the subsequent two quarters in order to monitor any change in concentrations of dissolved constituents. A comparable summary will be developed from that data and transmitted to Chevron.

If you should need any additional information, please do not hesitate to call.

Sincerely,

Terry R. Winsor
Senior Geologist

cc: Doug Selby

TABLE 1 CONCENTRATIONS OF PETROLEUM HYDROCARBONS (MG/LITER) IN THE GROUND WATER AT FORMER CHEVRON SS 9-2582, 7240 DUBLIN BOULEVARD, DUBLIN, CALIFORNIA, 20 DECEMBER 1988

Well No.	Date	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Petroleum Hydrocarbons
		Concentration in Ground Water (mg/liter) (ppm)				
MW1	12/20/88	<0.0005	<0.0005	<0.0005	<0.0005	<0.050
MW2	12/20/88	<0.0005	<0.0005	<0.0005	<0.0005	<0.050
MW3	12/20/88	0.090	0.0012	0.013	0.0033	0.240

TABLE 2 SUMMARY OF CONCENTRATIONS OF PETROLEUM HYDROCARBONS (MG/LITER) IN THE GROUND WATER AT FORMER CHEVRON SS 9-2582, 7240 DUBLIN BOULEVARD, DUBLIN, CALIFORNIA

Well No.	Date	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Petroleum Hydrocarbons
		Concentration in Ground Water (mg/liter) (ppm)				
EA1	12/20/88	<0.0005	<0.0005	<0.0005	<0.0005	<0.050
EA1	10/17/88	<0.0005	<0.0005	<0.0005	<0.0005	<0.050
EA2	12/20/88	<0.0005	<0.0005	<0.0005	<0.0005	<0.050
EA2	10/17/88	<0.0005	<0.0005	<0.0005	0.0012	<0.050
EA3	12/20/88	0.0900	0.0012	0.0130	0.0033	0.240
EA3	10/17/88	0.0018	<0.0005	<0.0005	0.0030	<0.050

TABLE 3 SUMMARY OF DEPTHS TO GROUND WATER AND THE ELEVATIONS OF THE TOP OF GROUND WATER AT FORMER CHEVRON SS 9-2582, DUBLIN, CALIFORNIA

Monitoring Well Number	Elevation Top of Casing (feet msl)	Depth to Product (feet)	Depth to Water (feet)	Elevation Top of Ground Water (feet msl)	Apparent Product Thickness (feet)
20 December 1988					
EA1	333.41		10.51	322.90	ND*
EA2	332.59		9.98	322.61	ND
EA3	333.64		10.96	322.68	ND
02 November 1988					
EA1	333.41		10.69	322.72	ND
EA2	332.59		10.03	322.56	ND
EA3	333.64		11.03	322.61	ND
24 October 1988					
EA1	333.41		10.64	322.77	ND
EA2	332.59		9.70	322.89	ND
EA3	333.64		11.03	322.61	ND

ND= not detected

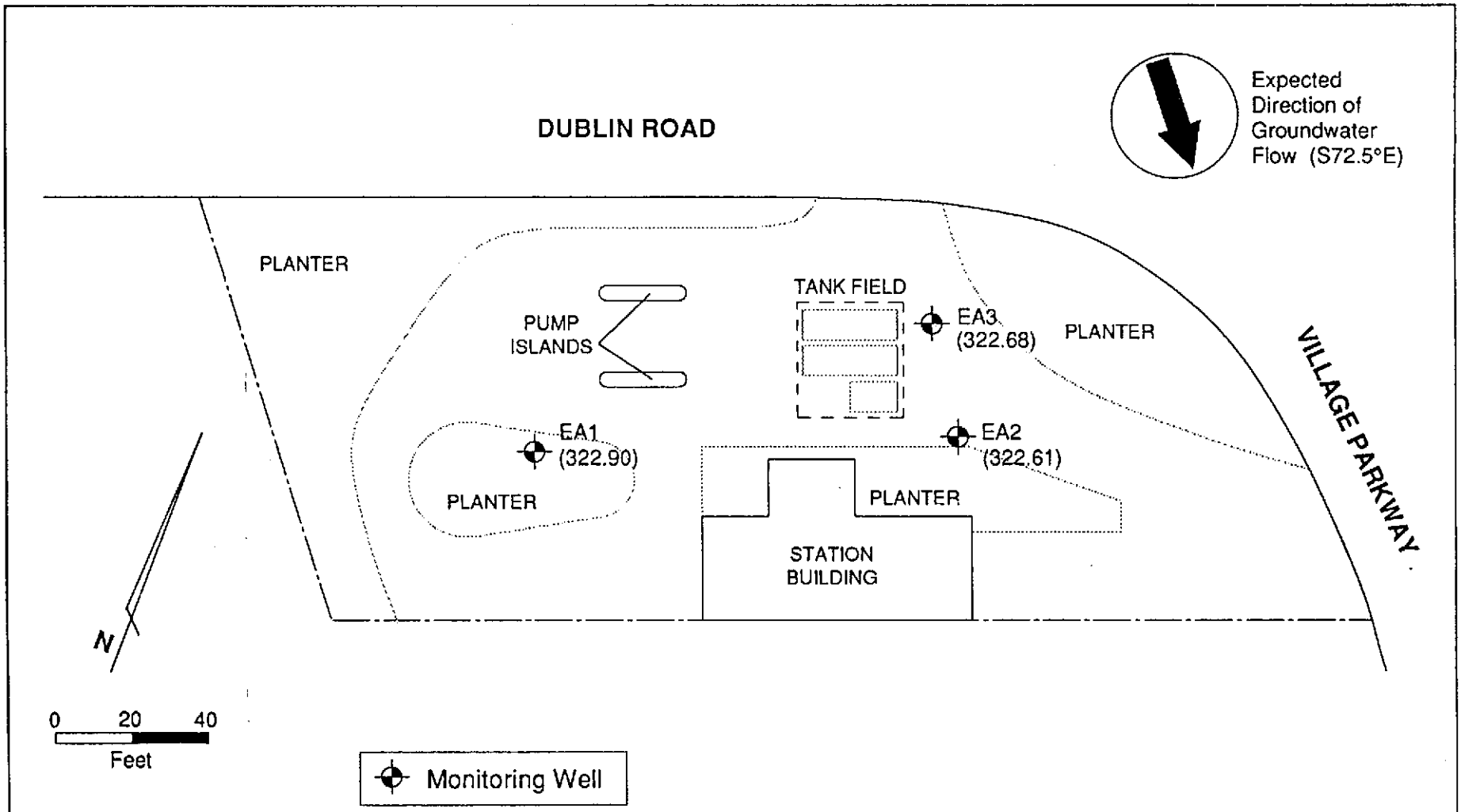

Figure 1. Elevations of the top of groundwater and indicated direction of ground-water flow at former Chevron SS 9-2582, Dublin, CA.

Drawn	Date
Reviewed	Date

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41 Lafayette Circle
Lafayette, CA. 94549

files

pace laboratories, inc
FORMERLY WESCO LABORATORIES

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California

Report date: January 2, 1989 Pace job #: EAE 08128 -L
Client: EA Engineering
41 A Lafayette Circle
Lafayette, CA 94549
Attn.: Terry Winsor

Date sampled: December 20, 1988 Site: Chevron Dublin 9-2582
Sampled by: M.S.

Date received: December 21, 1988 P.O.: proj.#10119.17
Submitted by: N. Glisson

Lab #	Client ID	Matrix	Analysis
8- 3040	EA 1	water	TPH light w/ BTXE
8- 3041	EA 2	water	TPH light w/ BTXE
8- 3042	EA 3	water	TPH light w/ BTXE

Dear Client,

No problems were encountered with the analysis of your samples. We will store samples for 30 days after the report date. The samples will be returned to the client after the 30-day period, unless other arrangements are made.
If you have any questions, please feel free to call Lisa Petersen, our Client Services Coordinator at (415)883-6100.

C. Sontag
Sample Controller

pace laboratories, inc
FORMERLY WESCO LABORATORIES

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California

Report Date:	29-Dec-88	Completion Date:	27-Dec-88
PACE JOB #:	EAE 08128-L	Reported by:	J.HARWOOD
Analytical Method:	EPA 5030/8015/8020	Analyst:	S.ATTIA
MATRIX:	WATER	Instrument I.D.:	VARIAN 3400

LAB #: 8-3040 CLIENT'S ID: EA 1

COMPOUND	RESULT (ug/l)	Detection Limit (ug/l)
Benzene	N.D.	0.5
Toluene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Xylene	N.D.	0.5
Total Petroleum Hydrocarbons (light)	N.D.	50.0

QUALITY CONTROL DATA
Surrogate Spike % Recovery
Fluorobenzene 84 %

LAB #: 8-3041 CLIENT'S ID: EA 2

COMPOUND	RESULT (ug/l)	Detection Limit (ug/l)
Benzene	N.D.	0.5
Toluene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Xylene	N.D.	0.5
Total Petroleum Hydrocarbons (light)	N.D.	50.0

QUALITY CONTROL DATA
Surrogate Spike % Recovery
Fluorobenzene 95 %

LAB #: 8-3042 CLIENT'S ID: EA 3

COMPOUND	RESULT (ug/l)	Detection Limit (ug/l)
Benzene	90	0.5
Toluene	1.2	0.5
Ethylbenzene	13	0.5
Xylene	3.3	0.5
Total Petroleum Hydrocarbons (light)	240	50.0

QUALITY CONTROL DATA
Surrogate Spike % Recovery
Fluorobenzene 81 %

N.D.: Not Detected

Douglas Thorn
Analytical Supervisor

pace laboratories, inc
FORMERLY WESCO LABORATORIES

REPORT OF LABORATORY ANALYSIS

Offices:
Minneapolis, Minnesota
Tampa, Florida
Coralville, Iowa
Novato, California

QUALITY CONTROL DATA
METHOD: EPA 5030/8015/8020 PACE JOB #: EAE 08128-L

COMPOUND	Blank ug/l	Spike Duplicate % deviation	Spike % recovery
Benzene------------	N.D.	2	102
Toluene------------	N.D.	1	101
p-Xylene-----------	N.D.	0	102
Gasoline-----------	N.D.	5	102

QUALITY CONTROL DATA
Surrogate Spike % Recovery

Fluorobenzene	87 %	102 %	104 %

N.D.: Not Detected

Analytical Supervisor

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CHAIN OF CUSTODY - REQUEST FOR ANALYSIS

☒ Lafayette, Ca. 41 Lafayette Cir. (415) 283-7077
☐ Newport Beach, Ca. 5001 Birch Street Suite B (714) 852-0513

RESULTS DUE DATE: 12/28/88 RUSH ☐ yes ☐ no
LABORATORY: PACE
LAB. I.D. NUMBER:
LAB. CONTACT: LISA

PROJECT NAME/LOCATION: CHEVRON DUBLIN 9-3582
PROJECT NUMBER: 10119.17
PROJ. MGR/EA CONTACT: TWINSOR
PHONE NUMBER: 283-7077
P.O. NUMBER:
SAMPLING TEAM: MS/WF
CARRIER/WAYBILL NUMBER:
DATE SAMPLES SHIPPED: 12/21/88

SAMPLE NUMBER	SAMPLE LOCATION	SAMPLE TYPE	COLLECTION DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES (METHODS)								
					TPH (8015 to DOHS modified) ☒ GAS ☐ DIESEL	VOLATILE AROMATICS ☐ ALL ☒ BTXE (8020/602)	GREASE and OIL (413.2/503E)	VHC (Halogen, 8010/601)	VOC GC/MS (8240/624)				Samples Received in Good Condition
EA 1	DUBLIN	GRAB	15:15	H2SO4	X	X							
EA 2	"	"	14:00	"	X	X							
EA 3	"	"	14:30	"	X	X							

EXPECTED NORMAL REPORTING LIMITS:

	BENZENE	TOLUENE	XYLENE	Et BENZENE	TPH				
Water	0.5ppb	0.5ppb	0.5ppb	0.5ppb	0.5ppm				
Soil	0.5ppb	0.5ppb	0.15ppm	0.5ppb	10ppm				

SPECIAL INSTRUCTIONS:

	NAME	COMPANY	DATE	TIME
Relinquished by:				
Received by:	Donald Tokarski	Pace Laboratories	12/21/88	1535
Relinquished by:	Donald Tokarski	Staff Scientist Courier	12/21/88	2000
Received by:	C. Sontag	PACE	12/21/88	2000
Relinquished by:				
Received by:				

DISTRIBUTION: White - Accompany Shipment
Last - Shipper (to file)