



**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

91 MAY 28 AM 11:39

Marketing Operations

R. B. Bellinger  
Manager, Operations  
S. L. Patterson  
Area, Manager, Operations  
C. G. Trimbach  
Manager, Engineering

May 23, 1991

Mr. Lawrence Seto  
Alameda County  
Environmental Health  
80 Swan Way, Room 200  
Oakland, California 94621

Re: Chevron Service Station #9-0329  
340 Highland Avenue  
Piedmont, CA 94611

Dear Mr. Seto:

Enclosed we are forwarding the Site Update Report presenting the results of the quarterly groundwater sampling event dated May 21, 1991, conducted by our consultant GeoStrategies, Inc. for the above referenced site. As indicated in the report, groundwater samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G), BTEX, and oil & grease (Well C-2 only). The results of these samples indicated Benzene concentrations ranging from ND to 810 ppb. We are currently evaluating the possible abandonment of Well C-1 as it continues to be dry.

Chevron is still in the process of securing encroachment permits to install additional wells off-site to obtain plume delineation. All necessary documents requested by the City of Piedmont have been compiled and will be submitted to the City of Piedmont the week of 5/27. For your information, we are currently evaluating a new and innovative technology proposed by our consultant Groundwater Technology, Inc. for possible installation at this site. The new technology is to install 3/4-inch diameter wells vs. 2-inch wells. The well installation process is simple and the design and construction is similiar to that of the conventional well. A letter is being prepared by Groundwater Technology, Inc. which will more fully describe the well design. For your information, we have received approval from the Regional Water Quality Control Board to install these wells at two (2) sites within Alameda County. The Alameda County Hazardous Materials Specialists for these sites are Mr. Paul Smith and Mr. Scott Seery.

Page 2  
May 23, 1991

Upon completion of this phase of the assessment, we will evaluate all the data to determine the appropriate remedial approach.

If you have any questions or comments please do not hesitate to contact me at (415) 842-9581.

Very truly yours,  
CHEVRON U.S.A. INC.



Nancy Vukelich  
Environmental Engineer

Enclosure

cc: Mr. Rich Hiett, RWQCB-Bay Area  
Mr. S.A. Willar  
File (9-0329Q1 Listing)



**GeoStrategies Inc.**

**SITE UPDATE**

**Chevron Service Station No. 0329  
340 Highland Avenue  
Piedmont, California**

**726101-5**

**May 21, 1991**

RECEIVED

MAY 22 1991



**GeoStrategies Inc.**

2140 WEST WINTON AVENUE  
HAYWARD, CALIFORNIA 94545

**GETTLER-RYAN INC.**

GENERAL CONTRACTORS

(415) 352-4800

May 21, 1991

Gettler-Ryan Inc.  
2150 West Winton Avenue  
Hayward, California 94545

Attn: Mr. Jeff Monroe

Re: SITE UPDATE  
Chevron Service Station No. 0329  
340 Highland Avenue  
Piedmont, California

Gentlemen:

This Site Update has been prepared by GeoStrategies Inc. (GSI) and presents the results of the second quarter ground-water sampling event for 1991 at the above referenced site (Plate 1). Ground-water sampling was performed by Gettler-Ryan Inc. (G-R) on April 16, 1991. The scope of work presented in this document was performed at the request of Chevron U.S.A. Inc. Field work and laboratory analyses were performed to comply with current State of California Water Resources Control Board guidelines.

**CURRENT QUARTER SAMPLING RESULTS**

Potentiometric Data

Prior to ground-water sampling, depth to ground-water levels were measured in the wells using an electronic oil-water interface probe. Monitoring well C-1 was reported as dry. Static ground-water levels were measured from the surveyed top of the well box and recorded to the nearest  $\pm 0.01$  foot. Corresponding ground-water elevations referenced to mean sea level are presented in Table 1. Water-level data have been plotted and contoured and are presented as a potentiometric map (Plate 1). Shallow ground-water flow is to the southwest at a calculated hydraulic gradient of 0.07.

726101-5

## GeoStrategies Inc.

Gettler-Ryan Inc.  
May 21, 1991  
Page 2

### Separate-phase Hydrocarbon Measurements

The wells were monitored for the presence of separate-phase hydrocarbons using an electronic oil-water interface probe. A clear acrylic bailer was used to confirm probe results. Separate-phase hydrocarbons were not detected during this sampling.

### Chemical Analytical Data

Ground-water samples were collected from site monitoring wells on April 16, 1991 by G-R. Field monitoring data collected during sampling is presented in Table 1. The samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline) according to EPA Method 8015 (Modified) and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) according to EPA Method 8020. In addition, monitoring well C-2 was analyzed for Total Oil and Grease (TOG) according to EPA Method 503E. Samples were analyzed by Superior Analytical Laboratory (Superior), a State-certified environmental laboratory located in San Francisco, California.

Current and available historical chemical analytical data are presented in Table 2. TPH-Gasoline was detected in monitoring well C-2 and tank backfill well A at concentrations of 9600 parts per billion (ppb) and 8000 ppb, respectively. Benzene was reported in Wells C-2 and A at concentrations of 810 ppb and 370 ppb, respectively. Monitoring wells C-3 and C-4 were reported as not detected (ND) for TPH-Gasoline and benzene. Monitoring well C-2 was ND for TOG. Superior analytical data and Chain-of-Custody Forms are presented in Appendix A.

### Quality Control

The quality control sample for this quarter's sampling was a trip blank. This sample was prepared in the laboratory using organic-free water to evaluate laboratory and field handling procedures of samples. The results of QC sample analyses are presented in Table 2.

**GeoStrategies Inc.**

Gettler-Ryan Inc.  
May 21, 1991  
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If you have any questions, please call.

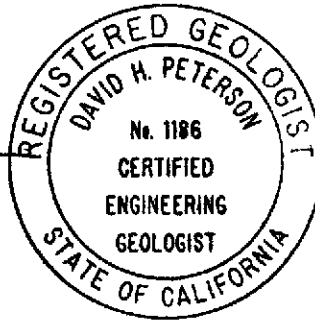
GeoStrategies Inc. by,

*Robert C. Mallory*

Robert C. Mallory  
Geologist

*David H. Peterson*

David H. Peterson  
Senior Geologist  
C.E.G. 1186



RCM/DHP/mlg

Plate 1. Potentiometric Map

Appendix A: Laboratory Analytical Report

TABLE 1

## FIELD MONITORING DATA

WELL NO.	MONITORING DATE	CASING DIA. (IN)	TOTAL WELL DEPTH (FT)	WELL ELEV. (FT)	DEPTH TO WATER (FT)	PRODUCT THICKNESS (FT)	STATIC WATER ELEV. (FT)	PURGED WELL VOLUMES	pH	TEMPERATURE (F)	CONDUCTIVITY (u MHOS/CM)
C-2	16-Apr-91	2	17.0	94.19	2.55	----	91.64	2	6.08	65.4	902
C-3	16-Apr-91	2	17.2	97.65	3.72	----	93.93	3	7.09	65.3	113
C-4	16-Apr-91	2	10.8	95.60	4.83	----	90.77	3	6.26	64.2	359
A	16-Apr-91	6	7.6	----	2.01	----	----	5	6.29	62.9	676
B	16-Apr-91	6	9.6	----	4.00	----	----	----	----	----	----

- Notes: 1. Static water elevations referenced to project datum.  
 2. Physical parameter measurements represent stabilized values.  
 3. pH values reported in pH units.  
 4. Well "B" was monitored but not sampled.

TABLE 2

## HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)	O & G (PPB)
07-Aug-89	C-2	34000.	580.	60.	170.	270.	12000.
15-Nov-89	C-2	8100	500	36	420	180	<5000
01-Feb-91	C-2	6800	490	21	310	86	7000
16-Apr-91	C-2	9600	810	43	550	270	<5000
07-Aug-89	C-3	<50.	<0.5	<1.	<1.	<3.	N/A
15-Nov-89	C-3	<500	<0.5	2.8	<0.5	1.1	<5000
01-Feb-91	C-3	<50	<0.5	<0.5	<0.5	<0.5	N/A
16-Apr-91	C-3	<50	<0.5	<0.5	<0.5	<0.5	N/A
15-Nov-89	C-4	1300	2.9	310	0.5	2.9	<5000
01-Feb-91	C-4	72	<0.5	9	<0.5	<0.5	N/A
16-Apr-91	C-4	<50	<0.5	<0.5	<0.5	<0.5	N/A
07-Aug-89	A	1000.	50.	6.	5.	22.	N/A
15-Nov-89	A	3700	98	2.1	4.3	55	<5000
01-Feb-91	A	36000	1100	750	130	6100	N/A
16-Apr-91	A	8000	370	6	86	750	N/A
16-Apr-91	TB	<50	<0.5	<0.5	<0.5	<0.5	N/A



TABLE 2

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HISTORICAL GROUND-WATER QUALITY DATABASE

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Current Regional Water Quality Control Board Maximum Contaminant Levels

Benzene 1. ppb    Xylenes 1750. ppb    Ethylbenzene 680. ppb

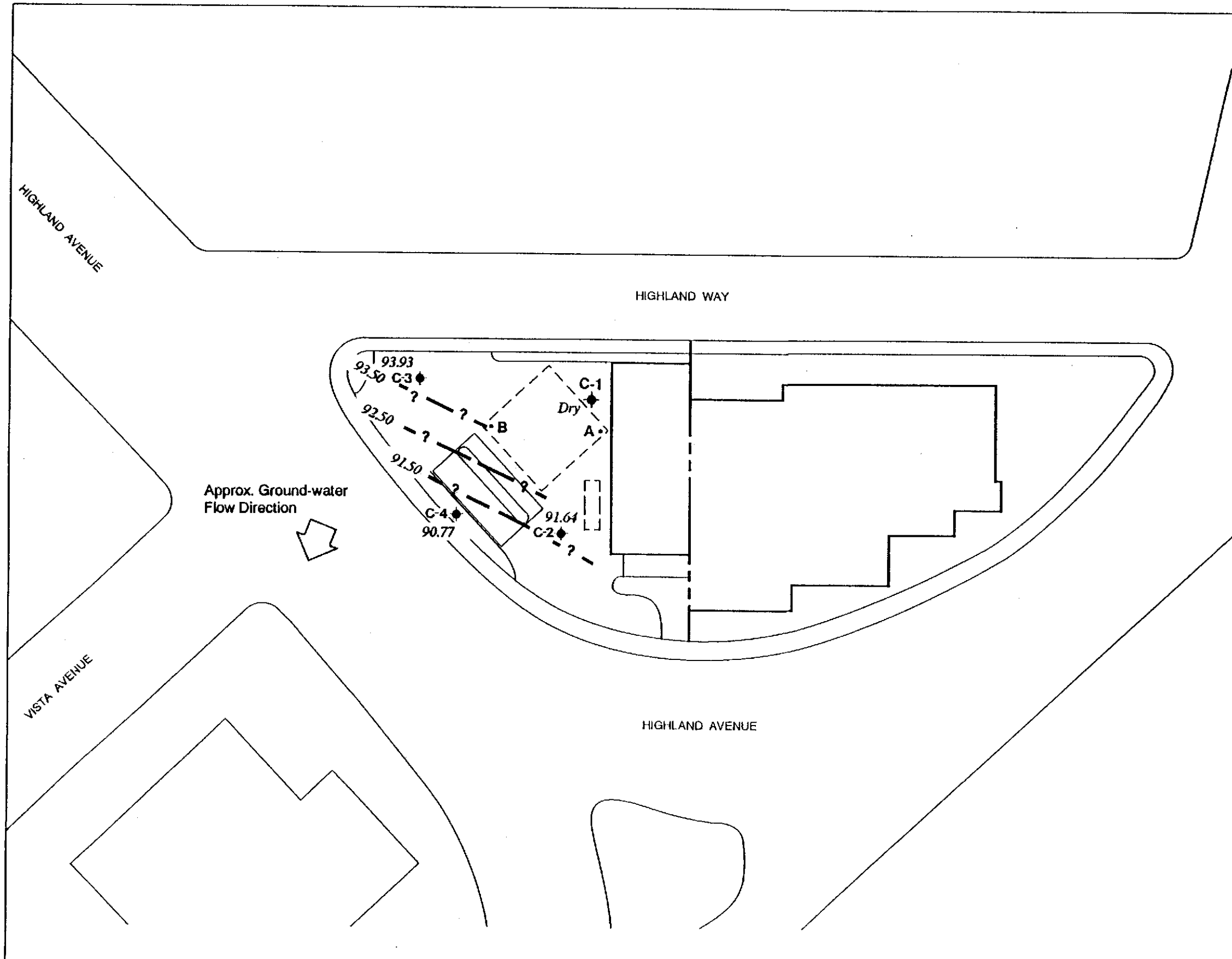
Current DHS Action Levels    Toluene 100.0 ppb

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline

PPB = Parts Per Billion    TB = Trip Blank

O&G = Oil and Grease

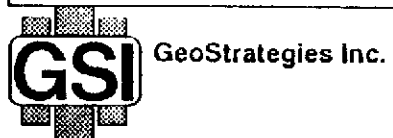
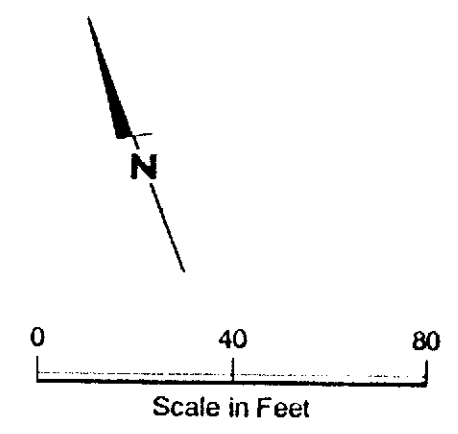
- NOTE: 1. DHS Action levels and MCL's are subject to change pending State of California review.
2. Oil and Grease chemical analytical data for sample point C-2 collected on 2/1/91, was originally reported in milligrams per liter (mg/L).
3. All data shown as <X are reported as ND (none detected).



**EXPLANATION**

- ◆ C-1 Ground-water monitoring well location
- A Tank hole monitoring well location
- 91.50 — Ground-water elevation contour  
Approximate Gradient = 0.07
- 91.64 Ground-water elevation in feet  
referenced to project datum  
measured on April 16, 1991

Note: Contours may be influenced by irrigation practices and/or site construction activities



JOB NUMBER  
726101-5

REVIEWED BY  
DHP

Potentiometric Map  
Chevron Service Station #0329  
340 Highland Avenue  
Piedmont, California

DATE	REVISED DATE	REVISED DATE
5/91		

PLATE  
**1**

**GeoStrategies Inc.**

APPENDIX A  
LABORATORY ANALYTICAL REPORT

RECEIVED

MAY 02 1991

SUPERIOR ANALYTICAL LABORATORY, INC.

GETTLER RYAN INC.

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

GENERAL CONTRACTORS  
DHS #1332

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

LABORATORY NO.: 11745  
CLIENT: Gettler Ryan Inc.  
CLIENT JOB NO.: 3261.01

DATE RECEIVED: 04/17/91  
DATE REPORTED: 04/29/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11745- 1	#2	04/16/91	04/23/91
11745- 2	#3	04/16/91	04/23/91
11745- 3	#4	04/16/91	04/24/91
11745- 4	A	04/16/91	04/22/91
11745- 5	TRIP BLANK	04/16/91	04/22/91

Laboratory Number:	11745	11745	11745	11745	11745
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	ND<5000	NA	NA	NA	NA
TPH/GASOLINE RANGE:	9600	ND<50	ND<50	8000	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	810	ND<0.5	ND<0.5	370	ND<0.5
TOLUENE:	43	ND<0.5	ND<0.5	6	ND<0.5
ETHYL BENZENE:	550	ND<0.5	ND<0.5	86	ND<0.5
XYLENES:	270	ND<0.5	ND<0.5	750	ND<0.5

OUTSTANDING QUALITY AND SERVICE

# SUPERIOR ANALYTICAL LABORATORY, INC.

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

DHS #1332

## 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: 11745

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

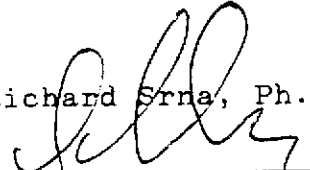
Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Water: 50ug/l  
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/l  
Standard Reference: 08/24/90

SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/l  
Standard Reference: 04/09/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	04/02/91	10mg	86/64	15	50-125
Diesel	NA	NA	NA	NA	NA
Gasoline	08/24/90	200ng	88/92	5	63-111
Benzene	04/09/91	200ng	91/86	5.6	72-119
Toluene	04/09/91	200ng	89/86	2.9	70-116
Ethyl Benzene	04/09/91	200ng	90/86	5.1	73-119
Total Xylene	04/09/91	600ng	92/87	5.8	71-118

Richard Srna, Ph.D.

  
Laboratory Director

OUTSTANDING QUALITY AND SERVICE

vron U.S.A. Inc.  
 ), BOX 500+  
 Ramon, CA 94583  
 (415)842-9591

Chevron Facility Number 0329  
 Facility Address 340 highland / piedmont  
 Consultant Project Number 3261.01  
 Consultant Name GreHler - Ryan  
 Address 2150 W Winton / Hayward  
 Project Contact (Name) Tom Paulson  
 (Phone) 783-7500 (Fax Number)

CHEMISTRY RECORD  
 Chevron Contact (Name) John Randall  
 (Phone) (415)547-7950  
 Laboratory Name Superior  
 Laboratory Release Number 2477970  
 Samples Collected by (Name) CHRIS O'CONNOR  
 Collection Date 4-16-91  
 Signature [Signature]

Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analysis To Be Performed										Remarks			
							BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Chlorinated HC (8010)	Non Chlorinated HC (8020)	Total Lead (AA)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)							
#2	4 <sup>CS</sup>	W		1209	HCL/None	✓	✓		✓											
#3	2	↓		1144	↓	✓	✓													
#4	2	↓		1155	↓	✓	✓													
A	2	↓		1059	↓	✓	✓													
Blank	1	W		4-15-91	↓	✓	✓													

Please initial:  
 Samples Stored in ice Y  
 Appropriate containers. Y  
 Samples preserved. Y  
 VOA's without headspace. Y  
 Comments:

Released By (Signature) <u>[Signature]</u>	Organization <u>G/R</u>	Date/Time <u>4-16-91/15:00</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>G/R</u>	Date/Time <u>4-16-91/15:00</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Released By (Signature) <u>[Signature]</u>	Organization <u>G/R</u>	Date/Time <u>4-17-91 08:00</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>G/R</u>	Date/Time <u>4-17-91 08:00</u>	
Released By (Signature) <u>[Signature]</u>	Organization <u>G/R</u>	Date/Time <u>4-17-91 16:49</u>	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time <u>4/17/91 4:55P</u>	