



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

Marketing Operations

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

March 6, 1991

RECEIVED

MAR - 8 1991

A.C.W.D.
ENGINEERING DEPT.

Mr. Paul Smith
Alameda County Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Former Chevron Station #9-4816
301 14th Street
Oakland, California

Dear Mr. Smith:

Enclosed we are forwarding the Site Update report dated March 1, 1991, prepared by our consultant GeoStrategies, Inc. for the above referenced site. This report documents the groundwater sampling results. As indicated in the report, hydrocarbon contamination was detected in all the onsite wells. Separate-phase hydrocarbons were observed in Wells CR-1, C-3 and C-5 at measured thicknesses of 3.0, 2.5, and .04 feet. Purging of these wells will continue until a dedicated recovery system can be designed and installed.

Chevron is still in the process of securing encroachment permits to install additional off-site wells to characterize the extent of the hydrocarbon contamination beneath the site. This has been a lengthy process due to the City of Oakland's permit requirements. However, we do expect approval soon. When received, Chevron will proceed with the installation of the wells. A formal report documenting the well installations will be forwarded to your office.

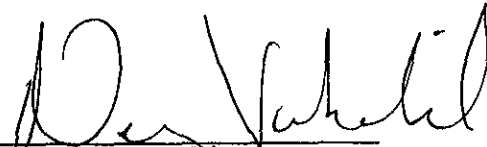
All improvements, including the underground storage tanks and associated piping have been removed. Elevated levels of hydrocarbon contamination were detected in the soils beneath one of the former tanks and in an area beneath one of the former pump islands. Chevron has initiated overexcavation in these areas to remove the elevated levels detected and to assess the magnitude and extent of the subsurface contamination. Confirmatory samples will be collected prior to backfilling the excavation.

March 6, 1991
Page 2

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

Very truly yours,
C.G. Trimbach

By



Nancy Vukelich

NLV/jmr
Enclosures

cc: Mr. Rich Hiett
RWQCB-Bay Area
1800 Harrison Street
Suite 700
Oakland, CA 94612

Mr. W.T. Scudder
Chevron Property Management Specialist



GeoStrategies Inc.

RECEIVED

MAR - 8 1991

**A.C.W.D.
ENGINEERING DEPT**

SITE UPDATE

**Chevron Service Station No. 4816
301 14th Street/Harrison
Oakland, California**

727001-5

March 1, 1991



GeoStrategies Inc.

2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545

RECEIVED

MAR 1 1991

GETTLER-RYAN INC.
GENERAL CONTRACTORS

March 1, 1991

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

Attn: Jeff Monroe

Re: SITE UPDATE
Chevron Service Station No. 4816
301 14th Street/Harrison
Oakland, California

Gentlemen:

This Site Update report has been prepared by GeoStrategies Inc. (GSI) and presents the results of the first quarter ground-water sampling for 1991 performed on January 7, 1991, by Gettler-Ryan Inc. (G-R) at the above referenced location (Plate 1). The scope of work presented in this document was performed at the request of Chevron U.S.A. Inc. Field work and laboratory analysis were performed to comply with current State of California Water Resources Control Board guidelines.

GROUND-WATER MONITORING

Potentiometric Data

Prior to ground-water sampling, water levels were measured in each well using an electronic oil-water interface probe. Static groundwater levels were measured from the surveyed top of each well box and recorded to the nearest ± 0.01 foot. Corresponding elevations to mean sea level are presented in Table 1. Water-level data have been used to construct a potentiometric map (Plate 1). Shallow ground-water flow is to the south at a calculated gradient of 0.003.

GeoStrategies Inc.

Gettler-Ryan Inc.
March 1, 1991
Page 2

Separate-Phase Hydrocarbon Measurements

Prior to sampling, each well was monitored for separate-phase petroleum hydrocarbons using an electronic oil-water interface probe. Each well was also inspected visually using a clear acrylic bailer to confirm interface probe results. Separate-phase hydrocarbons were observed at measured thicknesses of 3.0 feet, 2.5 feet and 0.04 feet in monitoring wells CR-1, C-3 and C-5, respectively.

Currently the wells are monitored on a weekly schedule for separate-phase hydrocarbons and depth to water. Between January 11 and February 15, 1991, the sampling schedule was disrupted by the removal of underground fuel tanks at the site. A copy of the monitoring data is presented in Appendix A. Monitoring of the wells during this quarter indicate that the greatest observed thickness of measured hydrocarbons was 2.92 and 2.93 feet in Wells CR-1 and C-3 on February 15, 1991. Approximately 35 gallons of separate-phase hydrocarbons were bailed from the monitoring wells during this quarter.

CHEMICAL ANALYTICAL DATA

Groundwater Sampling

Groundwater samples were collected from the site monitoring wells by Gettler-Ryan Inc. (G-R) on January 7, 1991. The ground-water 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. Ground-water samples were analyzed by Superior Analytical Laboratory Inc. (Superior), a State-certified analytical laboratory located in San Francisco, California.

A summary of the chemical analytical data for this quarter is presented in Table 1. A historical summary of available groundwater chemical analytical data is presented in Table 2. A copy of the G-R ground-water sampling report, Chain-of-Custody forms, and Superior analytical report is presented in Appendix B.

GeoStrategies Inc.

Gettler-Ryan Inc.
March 1, 1991
Page 3

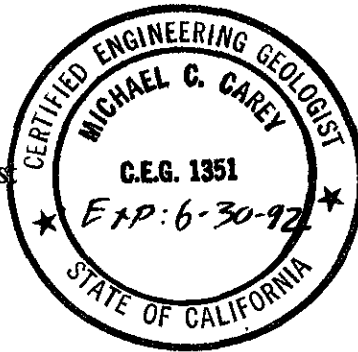
If you have any questions, please call.

GeoStrategies Inc. by,

Randall Young

Randall S. Young
Project Geologist

Michael Carey
Michael C. Carey
Engineering Geologist
C.E.G. 1351



RSY/MCC/mlg

Plate 1. Potentiometric Map

Appendix A: Gettler-Ryan Inc. Ground-water Monitoring Data
Appendix B: Gettler-Ryan Inc. Ground-water Sampling Report

TABLE 1

GROUND-WATER ANALYSES DATA

WELL NO	SAMPLE DATE	ANALYZED DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)	WELL ELEV (FT)	STATIC WATER ELEV (FT)	PRODUCT THICKNESS (FT)	DEPTH TO WATER (FT)
C-1	07-Jan-91	12-Jan-91	100,000	12,000	20,000	1,600	11,000	30.82	8.87	----	21.95
C-2	07-Jan-91	12-Jan-91	15,000	3400	2500	340	1400	30.91	8.88	----	22.03
C-3	07-Jan-91	12-Jan-91	----	----	----	----	----	31.02	8.89	2.5	24.13
C-4	07-Jan-91	12-Jan-91	890	100	130	15	88	31.42	8.68	----	22.74
C-5	07-Jan-91	12-Jan-91	----	----	----	----	----	31.25	8.92	0.04	22.36
CR-1	07-Jan-91	12-Jan-91	----	----	----	----	----	30.52	9.62	3.0	23.30
TB	07-Jan-91	12-Jan-91	<50	<0.5	<0.5	<0.5	<0.5	----	----	----	----

CURRENT REGIONAL WATER QUALITY CONTROL BOARD MAXIMUM CONTAMINANT LEVELS

Benzene 1.0 ppb Xylenes 1,750 ppb Ethylbenzene 680 ppb

CURRENT DHS ACTION LEVELS

Toluene 100 ppb

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline

PPB = Parts Per Billion TB = Trip Blank

Notes: 1. All data shown as <x are reported as ND (none detected).

2. Static Water elevations referenced to mean sea level (MSL). Elevations are corrected for free product using a correction factor of 0.8.

3. DHS Action Levels and MCLs are subject to change pending State review.

TABLE 2

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HISTORICAL GROUNDWATER QUALITY DATABASE
301 14th Street, Oakland

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	E.B. (PPB)	XYLENES (PPB)
13-Jun-90	C-1	26000	2800	5100	400	2600
30-Oct-90	C-1	67000	6700	8700	900	5000
07-Jan-91	C-1	100000	12000	20000	1600	11000
13-Jun-90	C-2	15000	1100	1900	260	1700
30-Oct-90	C-2	13000	2800	1900	240	1000
07-Jan-91	C-2	15000	3400	2500	340	1400
13-Jun-90	C-3	Floating Product			-	3.0 feet
30-Oct-90	C-3	Floating Product			-	2.5 feet
07-Jan-91	C-3	Floating Product			-	2.5 feet
13-Jun-90	C-4	440	47	47	3	61
30-Oct-90	C-4	210	72	13	1	11
07-Jan-91	C-4	890	100	130	15	88
30-Oct-90	C-5	20000	2500	3300	320	2200
07-Jan-91	C-5	Floating Product			-	0.04 feet
30-Oct-90	CR-1	Floating Product			-	2.5 feet
07-Feb-91	CR-1	Floating Product			-	3.0 feet

TPH-G = Total Petroleum Hydrocarbons calculated as gasoline

E.B. = Ethylbenzene

PPB = Parts per billion

NOTE: All data shown as <X are reported as ND (none detected)

GeoStrategies Inc.

APPENDIX A
GETTLER-RYAN INC.
GROUND-WATER MONITORING DATA

GeoStrategies Inc.

ILLUSTRATIONS

14th STREET

EXPLANATION

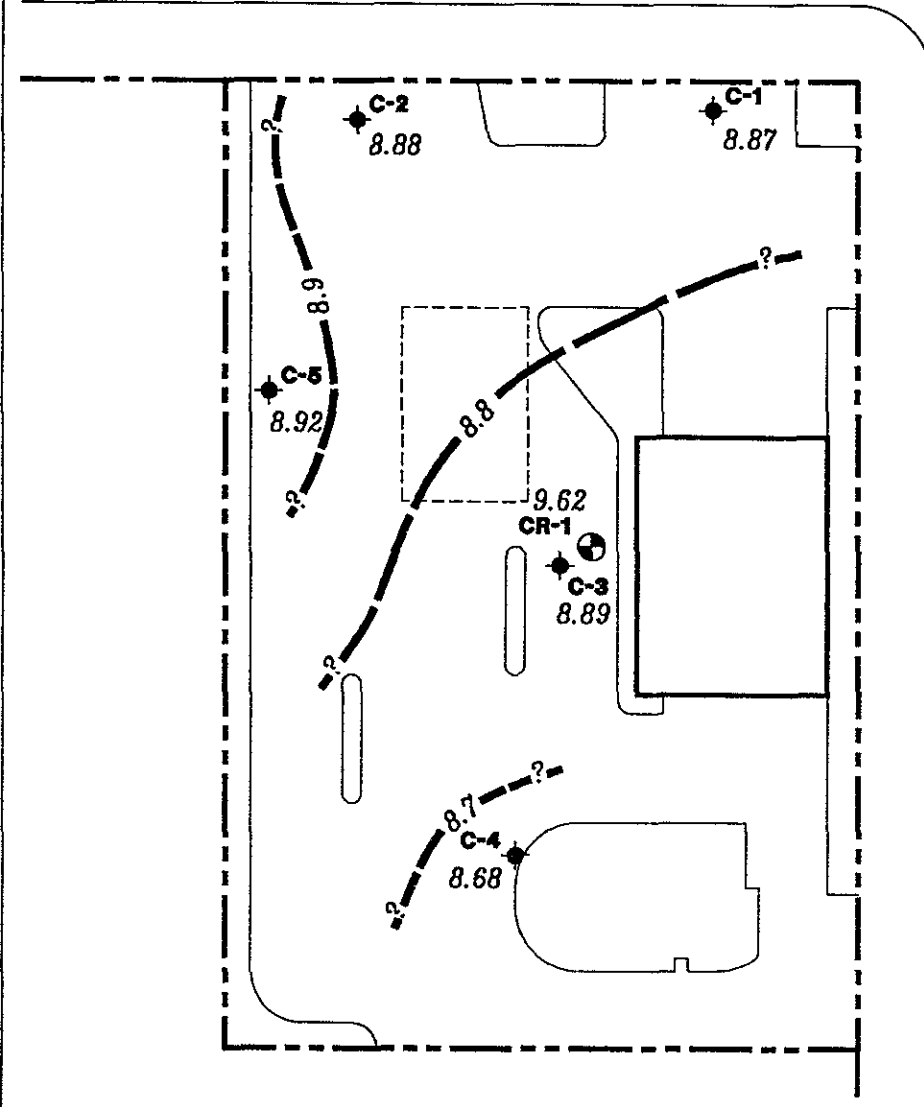
◆ Ground-water monitoring well

⊕ Recovery well

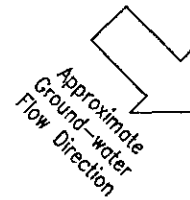
--- 99.99 ---
Ground-water elevation contour
Approximate Gradient = .003

99.99
Ground-water elevation in feet
referenced to Mean Sea Level
(MSL) measured on January 7,
1991

Note: Wells C-3 and CR-1
not used in counting.



HARRISON STREET



Base Map: Field observations



Scale in Feet



GeoStrategies Inc.

POTENTIOMETRIC MAP
Chevron Service Station
301 14th Street
Oakland, California

PLATE

1

JOB NUMBER
727001-5

REVIEWED BY
MCC

DATE
2/91

REVISED DATE

DATE	WELL	DTH	DTW	HT	BAILED	PPM	LEL	NORM	DTB	EMP	C.ELEV
30-Nov-90	CR1	21.35	24.02	2.67	2.0					SM	
14-Dec-90	CR1	21.25	23.78	2.53	4.0					RA	
28-Dec-90	CR1	21.30	23.94	2.64	2.0					SM	
04-Jan-91	CR1	21.38	24.08	2.70	3.5					RA	
07-Jan-91	CR1	20.30	23.30	3.0	0.0					JZ	
11-Jan-91	CR1	21.60	24.24	2.64	3.0					SM	
15-Feb-91	CR1	21.80	24.72	2.92	0.0					RA	
30-Nov-90	C1		21.75	0.00							
14-Dec-90	C1		21.67	0.00							
28-Dec-90	C1		21.72	0.00							
04-Jan-91	C1		21.84	0.00							
07-Jan-91	C1		21.95	0.00							
11-Jan-91	C1	21.99	(1.00)	0.00							
15-Feb-91	C1	22.12	(1.00)	0.00							
30-Nov-90	C2		21.83	0.00							
14-Dec-90	C2		21.77	0.00							
28-Dec-90	C2		21.81	0.00							
04-Jan-91	C2		21.90	0.00							
07-Jan-91	C2		22.03	0.00							
11-Jan-91	C2	22.13	(1.00)	0.00							
15-Feb-91	C2		22.36	0.00							
30-Nov-90	C3	21.45	24.24	0.30	4.0						
14-Dec-90	C3	21.34	23.88	2.54	4.0						
28-Dec-90	C3	21.38	24.03	2.65	4.0						
04-Jan-91	C3	21.45	24.15	2.70	3.5						
07-Jan-91	C3	21.63	24.13	2.50	0.0						
11-Jan-91	C3	21.69	24.35	2.66	4.0						
15-Feb-91	C3	21.77	24.70	2.93	0.0						
30-Nov-90	C4		22.53	0.00							
14-Dec-90	C4		22.45	0.00							
28-Dec-90	C4		22.51	0.00							
04-Jan-91	C4		22.64	0.00							
07-Jan-91	C4		22.74	0.00							
11-Jan-91	C4	22.81	(1.00)	0.00							
15-Feb-91	C4		22.55	0.00							
30-Nov-90	C5		22.25	0.00							
14-Dec-90	C5		22.12	0.00							
28-Dec-90	C5	22.24	(1.00)	0.00							
04-Jan-91	C5	22.24	22.55	0.31	0.75						
07-Jan-91	C5	22.32	22.36	0.04	0.0						
11-Jan-91	C5	22.35	23.08	0.73	0.5						
15-Feb-91	C5	21.96	24.70	2.74	0.0						

GeoStrategies Inc.

APPENDIX B
GETTLER-RYAN INC.
GROUNDWATER SAMPLING REPORT



January 24, 1991

GROUNDWATER SAMPLING REPORT

Chevron U.S.A. Inc.
Post Office Box 5004
San Ramon, California 94583-0804

Referenced Site: Chevron Service Station #4816
301 14th Street/Harrison
Oakland, California

Sampling Date: January 7, 1991

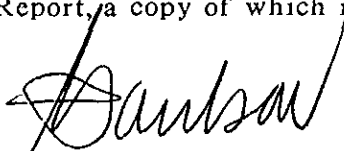
This report presents the results of the quarterly groundwater sampling and analytical program conducted by Grettler-Ryan Inc. on January 7, 1991 at the referenced location. The site is occupied by a service station located on the southwest corner of Harrison Street and Fourteenth Street. The service station has underground storage tanks containing regular leaded, unleaded and super unleaded gasoline products.

There are currently five groundwater monitoring wells and one recovery well on site at the locations shown on the attached site map. Prior to sampling, all wells were inspected for total well depth, water levels, and the presence of separate phase hydrocarbons using an electronic interface probe. A clean acrylic bailer was used to visually confirm the presence and thickness of separate phase hydrocarbons. Groundwater depths ranged from 21.95 to 24.13 feet below grade. Separate phase hydrocarbons were observed in Wells C-3, C-5, and CR-1.

Wells that did not contain separate phase hydrocarbons were purged and sampled. The purge water was contained in drums for proper disposal. Standard sampling procedure calls for a minimum of four case volumes to be purged from each well. Each well was purged while pH, temperature, and conductivity measurements were monitored for stability. Details of the final well purging results are presented on the attached Table of Monitoring Data. In cases where a well dewatered or less than four case volumes were purged, groundwater samples were obtained after the physical parameters had stabilized. Under such circumstances the sample may not represent actual formation water, due to low flow conditions.

Samples were collected, using Teflon bailers, in properly cleaned and laboratory prepared containers. All sampling equipment was thoroughly cleaned after each well was sampled and steam cleaned upon completion of work at the site. The samples were labeled, stored on blue ice, and transported to the laboratory for analysis. A trip blank, supplied by the laboratory, was included and analyzed to assess quality control. Analytical results for the trip blank are included in the Certified Analytical Report (CAR's). Chain of custody records were established noting sample identification numbers, time, date, and custody signatures.

The samples were analyzed by Superior Analytical Inc., located at 1555 Burke, Unit 1, San Francisco, California. The laboratory is assigned a California DHS-HMTL Certification number of 1332. The results are presented as a Certified Analytical Report, a copy of which is attached to this report.

A handwritten signature in black ink, appearing to read "Paulson", written over a horizontal line.

Tom Paulson
Sampling Manager

attachments

TABLE OF MONITORING DATA
GROUNDWATER WELL SAMPLING REPORT

<u>WELL I.D.</u>	C-1	C-2	C-3	C-4	C-5	CR-1
Casing Diameter (inches)	2	2	2	2	2	6
Total Well Depth (feet)	32.7	31.9	----	31.7	----	----
Depth to Water (feet)	21.95	22.03	24.13 **	22.74	22.36 **	23.30 **
Free Product (feet)	none	none	2.5	none	0.04	3.0
Reason Not Sampled	----	----	free product	----	free product	free product
Calculated 4 Case Vol.(gal.)	7.7	6.7	----	6.1	----	----
Did Well Dewater?	no	no	----	no	----	----
Volume Evacuated (gal.)	10.0	8.5	----	7.0	----	----
Purging Device	Bailer	Bailer	----	Bailer	----	----
Sampling Device	Bailer	Bailer	----	Bailer	----	----
Time	10:57	11:07	----	11:34	----	----
Temperature (F)*	67.3	67.8	----	64.1	----	----
pH*	6.17	6.13	----	5.92	----	----
Conductivity (umhos/cm)*	1048	855	----	958	----	----

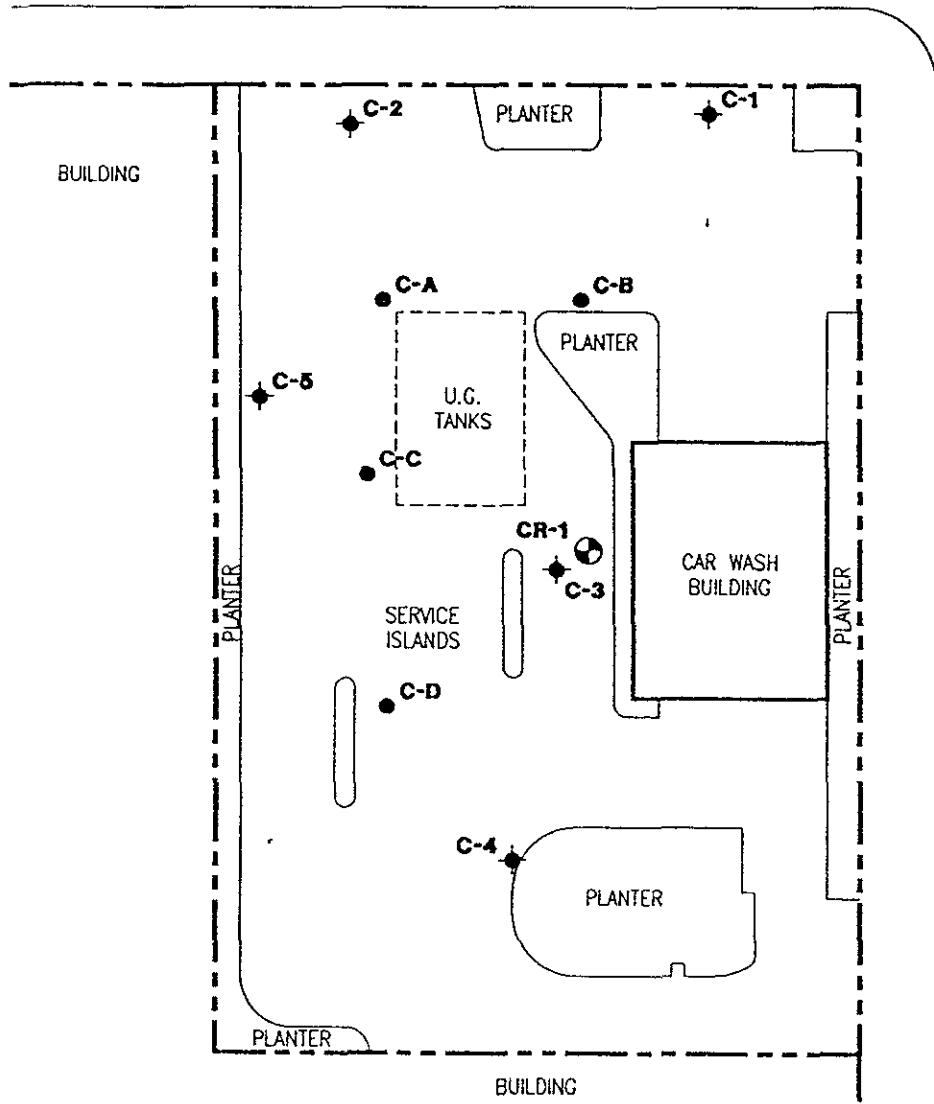
* Indicates Stabilized Value

** Not corrected for presence of free product

14th STREET

EXPLANATION

- ◆ Ground-water monitoring well
- ⊕ Recovery well
- Soil boring



HARRISON STREET



Base Map: Field observations



Scale in Feet



GeoStrategies Inc.

SITE PLAN
 Chevron Service Station #4816
 301 14th Street
 Oakland, California

PLATE
2

JOB NUMBER
7270

REVIEWED BY RG/CEG

DATE
11/90

REVISED DATE

RECEIVED

JAN 18 1991

SUPERIOR ANALYTICAL LABORATORY, INC.

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

GENERAL CONTRACTORS

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11343
CLIENT: Gettler Ryan Inc.
CLIENT JOB NO.: 3270.01

DATE RECEIVED: 01/08/91
DATE REPORTED: 01/15/91

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
11343- 1	C-1	01/07/91	01/12/91
11343- 2	C-2	01/07/91	01/12/91
11343- 3	C-4	- 01/07/91	01/12/91
11343- 4	Trip	01/07/91	01/14/91

Laboratory Number:	11343	11343	11343	11343
	1	2	3	4

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	100000	15000	890	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	12000	3400	100	ND<0.5
TOLUENE:	20000	2500	130	ND<0.5
ETHYL BENZENE:	1600	340	15	ND<0.5
XYLENES:	11000	1400	88	ND<0.5

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

Page 2 of 2
QA/QC INFORMATION
SET: 11343

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: 10/22/90

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	10/22/90	200ng	90/92	3	75-125
Benzene	10/22/90	200ng	88/95	7	75-130
Toluene	10/22/90	200ng	86/94	10	75-130
Ethyl Benzene	10/22/90	200ng	88/97	9	75-130
Total Xylene	10/22/90	600ng	87/96	10	75-130

Richard Srna, Ph.D.
Cecilia G. Gonzalez (for)
Laboratory Director

ST # 11243

Chevron U.S.A. Inc.
 P.O. BOX 5004
 San Ramon, CA 94583
 FAX (415)842-9591

Chevron Facility Number 4816
 Facility Address 301 14th St.
 Consultant Project Number 3270.01
 Consultant Name Gettler - Ryan
 Address 2150 W. Winton, Hayward
 Project Contact (Name) Tom Paulson
 (Phone) (415) 783-7500 (Fax Number) 783-1069

Chevron Contact (Name) _____
 (Phone) _____
 Laboratory Name Superior
 Laboratory Release Number 3523000
 Samples Collected by (Name) John P. Zwierzycki
 Collection Date 1-7-91
 Signature John P. Zwierzycki

Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses 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)					
C-1	3	W		10:51	HCl	yes	✓											
C-2	3	↓		11:07	↓	↓	✓											
C-4	3	↓		11:34	↓	↓	✓											
TRIP	1	↓		-	↓	↓	✓											

Please initial: (Signature)
 Samples Stored in ice. Y
 Appropriate containers. Y
 Samples preserved. Y
 VOA's with out headspace. Y
 Comments: _____

Relinquished By (Signature) <u>John P. Zwierzycki</u>	Organization <u>Gettler/Ryan</u>	Date/Time <u>1-7-91/14:45</u>	Received By (Signature) <u>ReFrig #1</u>	Organization <u>GIR</u>	Date/Time <u>1-7-91 14:46</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) <u>ReFrig #1</u>	Organization <u>GIR</u>	Date/Time <u>1-8-91 859</u>	Received By (Signature) <u>Buy Back</u>	Organization <u>GIR</u>	Date/Time <u>1-8-91 900</u>	
Relinquished By (Signature) <u>Tom Paulson</u>	Organization <u>GIR</u>	Date/Time <u>1-8-91 10:36</u>	Received For Laboratory By (Signature) <u>John P. Zwierzycki</u>	Organization <u>SAC 1/8/91</u>	Date/Time <u>10:35</u>	

CC-1-DWG/... 80/401