GROUNDWATER TECHNOLOGY ®

Groundwater Technology, Inc.
4057 Port Chicago Highway, Concord, CA 94520 USA
Tel: (510) 671-2387 Fax: (510) 685-9148

Ro 233

ADDITIONAL SITE ASSESSMENT REPORT
CHEVRON SERVICE STATION NO. 9-4612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

9/29/95

GTI Project 020204530

September 29, 1995

Prepared for:
Mr. Mark Miller
Chevron U.S.A. Products Company
6001 Bollinger Canyon Road, Building L
San Ramon, California 94583-0804

Groundwater Technology, Inc.
Submitted by:

Michael A. Chamberlain
Project Manager

Groundwater Technology, Inc.
Approved by:

E.K. Simonis, R.G.
Senior Geologist

REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

For:
Wendell W. Lattz
Vice President, General Manager
West Region

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1.0 INTRODUCTION

This report summarizes the environmental assessment work conducted by Groundwater Technology, Inc., at Chevron U.S.A. Products Company (Chevron) Service Station No. 9-4612 located at 3616 San Leandro Street, Oakland, California (figure 1). A *Work Plan for Additional Site Assessment* (Groundwater Technology 1994) presented the scope of the work performed. The objective of the work was to evaluate the lateral and vertical extent of petroleum hydrocarbons in the soil and groundwater beneath the site. The assessment was performed during August 1995 and included drilling two soil borings (MW-4 and SB-1), collecting soil samples, completing one soil boring as a 2-inch-diameter monitoring well, abandoning the remaining soil boring, collecting groundwater samples, analyzing the collected soil and groundwater samples, evaluating the data, and preparing this report.

2.0 BACKGROUND

The site is located in Alameda County, in south Oakland on the northwest corner of the San Leandro Street and the 37th Avenue intersection (figure 2). Commercial businesses are located east, west, and south of the site. Bay Area Rapid Transit (BART) tracks are to the north and the Fruitvale BART station is to the north-northwest. Currently, the site is a fenced, unpaved lot with a commercial building on the eastern portion of the lot. The surface elevation at the site is approximately 28 feet above mean sea level. The Inner Harbor Waterway linking San Francisco Bay with San Leandro Bay is approximately 0.5 miles east of the site.

On August 9, 1988, one groundwater monitoring well (VH-1) was installed to a depth of 30 feet by Vonder Haar Hydrogeology of Berkeley, California. Analytical results of soil and groundwater samples collected from VH-1 reported elevated concentrations of total petroleum hydrocarbons as gasoline (TPH-g) and benzene (Vonder Haar Hydrogeology 1988). According to the Vonder Haar report, the underground fuel storage tanks had been removed and three soil borings (B-1 through B-3) installed.

In February 1993, Groundwater Technology supervised the installation of two additional groundwater monitoring wells (MW-2 and MW-3). Analytical reports for soil samples indicated no detectable concentrations of TPH-g and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Elevated concentrations of dissolved TPH-g and BTEX were detected in groundwater samples. Since August 1988, the monitoring wells at the site have been monitored and sampled on an irregular basis with analytical results documenting an impact to groundwater.

3.0 WORK SCOPE

3.1 Site-Specific *Health and Safety Plan* and Permits

Groundwater Technology prepared a site-specific *Health and Safety Plan* required by the Occupational Health and Safety Administration Standard Hazardous Waste Operations and Emergency Response guidelines (29 Code of Federal Regulations [CFR] 1910.120). The site-specific *Health and Safety Plan* was prepared after a review of site conditions and existing available site-specific health and safety plans. The *Health and Safety Plan* was reviewed and signed by Groundwater Technology personnel and subcontractors before beginning work at the site.

Groundwater Technology personnel reviewed site history and information with Chevron representatives before beginning work at the site. A Minor Encroachment Permit and an Excavation permit were obtained from the City of Oakland on May 18, 1995, and revised on August 10, 1995. A drilling permit to install one monitoring well and one soil boring was approved by Mr. Wyman Hong of the Alameda County Zone 7 Water Agency on August 15, 1995. A copy of the permit is included in appendix A.

3.2 Soil Borings

On August 15, 1995, Groundwater Technology supervised the drilling of two soil borings, MW-4 and SB-1 (figure 2). A Groundwater Technology field geologist, under the supervision of a California registered geologist, logged the materials encountered during drilling of the soil borings using the Unified Soil Classification System. Drilling was completed on August 15, 1995. Soil borings MW-4 and SB-1 were drilled to total depths of 21.5 feet below surface grade (bsg). The borehole of soil boring MW-4 was completed as a groundwater monitoring well. Prior to backfilling soil boring SB-1, a grab sample of the groundwater accumulated in the borehole was collected for chemical analysis at the request of the Alameda County Health Services Agency representative, Mr. Barney Chan. The borehole for SB-1 was backfilled on August 15, 1995, with a bentonite/concrete grout mixture. Drilling logs are presented in appendix B.

The soil cuttings generated during the drilling activities were placed onto and covered with plastic at the site. Soil cuttings were then characterized, profiled, and removed.

3.3 Soil Sampling

During drilling, soil samples were collected from soil borings at 5-foot intervals between approximately 5 to 20 feet bsg. Soil samples were collected using a 2-inch-diameter split-spoon sampler lined with three 2-inch-diameter by 6-inch-long brass sample tubes. At each sample point, the sampler was advanced 18 inches ahead of the hollow-stem augers into undisturbed soil. One soil sample from each 5-foot interval was collected, sealed with aluminum foil, capped, taped, labeled, placed on ice in an insulated container, and delivered to a California-certified laboratory. Soil sampling was performed according to Groundwater Technology Standard Operating Procedures (SOPs), which are included in appendix C.

Soil samples collected at approximately 16.5 and 21.5 feet bsg in soil boring MW-4 and 21.5 feet bsg in soil borings SB-1 were submitted to a California-certified laboratory for analyses of BTEX and TPH-g using Environmental Protection Agency (EPA) Methods 5030/8020/Modified 8015.

3.4 Monitoring Well Installation

Monitoring well MW-4 was constructed using 7 feet of 2-inch-diameter, Schedule 40 polyvinyl chloride (PVC) blank casing and 13 feet of 0.020-inch-slot well screen. A sand filter pack was placed around the well screen to approximately 3 feet above the slotted well screen. The monitoring well was completed with 1.5 feet of hydrated bentonite and neat cement seal to grade. The wellhead was finished with a locking cap and a street box with a water-tight bolted lid. Well construction details are included with the drilling log in appendix B. The top of casing elevation of the monitoring well was surveyed relative to the mean sea level datum by a licensed land surveyor on September 7, 1995, using a U.S. Geodetic Survey bench mark (Q148, reset 1950) located in the flagpole base at the American Can Company plant near the corner of 8th Street and 37th Avenue.

3.5 Monitoring Well Development, Monitoring, and Sampling

The developing, monitoring, and sampling of groundwater monitoring well MW-4 was conducted by Chevron's contracted groundwater monitoring and sampling consultant, Blaine Technical Services (Blaine Tech) on August 22, 1995, as part of the site's scheduled quarterly monitoring and sampling event.

4.0 SITE CONDITIONS

4.1 Hydrogeology

The materials encountered during drilling primarily consisted of pebbly sandy clay, to pebbly silty clayey sand. During drilling on August 15, 1995, water was first noticed at approximately 15 feet bsg. The depth to water prior to the completion of the drilling activities was found to be at 9.02 feet bsg in monitoring well MW-4, and approximately 18 feet bsg in soil boring SB-1. The top-of-casing elevation for monitoring well MW-4 is presented on the drilling log (appendix B).

4.2 Analytical Results of Soil Samples

Laboratory analytical reports of soil samples collected from soil borings MW-4, and SB-1 on August 15, 1995, indicated TPH-g concentrations ranging from less than the method detection limit (MDL) of 1 milligram per kilogram (mg/kg) to 16 mg/kg. No concentrations of benzene were detected in any of the soil samples. The analytical results indicated concentrations of toluene, ethylbenzene, and total xylenes up to 0.12 mg/kg, up to 0.21 mg/kg, and up to 1.1 mg/kg, respectively. The results of the soil sample analyses are summarized in table 1 and laboratory reports are included in appendix D.

4.3 Analytical Results of Groundwater Samples

Laboratory analytical reports of groundwater samples collected by Blaine Tech from groundwater monitoring well MW-4 indicated dissolved TPH-g at concentrations of 9,600 micrograms per liter (μg/L), benzene at 100 μg/L, and toluene, ethylbenzene, and total xylenes below their MDLs. Analytical results of the groundwater grab samples collected from soil boring SB-1 indicated concentrations of TPH-g at 21,000 μg/L and BTEX at 240 μg/L, 760 μg/L, 900 μg/L, and 2,800 μg/L, respectively. The results of the groundwater analyses are summarized in table 2 and laboratory reports are included in appendix D.

5.0 SUMMARY

- On August 15, 1995, Groundwater Technology supervised the drilling of two soil borings. The soil borings were advanced to total depths of 21.5 feet. Soil boring MW-4 was completed as a 2-inch-diameter groundwater monitoring well. Following the collection of

soil samples and a grab sample of groundwater, soil boring SB-1 was backfilled to surface grade with cement.

- The materials encountered during drilling primarily consisted of pebbly sandy clay to pebbly silty clayey sand. The depth to groundwater encountered during drilling on August 15, 1995, was approximately 15 feet bsg; however, groundwater rose to a static level of approximately 9 feet bsg in MW-4.

- Analytical results of the soil samples collected during drilling activities of soil borings MW-4 and SB-1 indicated TPH-g concentrations up to 16 mg/kg, benzene below the MDL, and low concentrations of toluene, ethylbenzene, and total xylenes.

- Analytical results of the groundwater samples collected by Blaine Tech from MW-4 on August 22, 1995 from monitoring well MW-4 indicated dissolved TPH-g and benzene concentrations at 9,600 μg/L and 100 μg/L, respectively, and no concentrations of toluene, ethylbenzene, and total xylenes above the MDL of 10 μg/L. Analytical results of the groundwater grab samples collected from soil boring SB-1 indicated concentrations of TPH-g and benzene at 21,000 μg/L and 240 μg/L, respectively. Groundwater samples collected from SB-1 also contained 760 μg/L toluene, 900 μg/L ethylbenzene, and 2,800 μg/L total xylenes, in contrast to no detectable levels of these analytes in MW-4.

6.0 REFERENCES

Alameda County Flood Control and Water Conservation District. June 1988. Geohydrogeology and Groundwater-Quality Overview, East Bay Plain Area, Alameda County, California, 205(J) Report.

Groundwater Technology, Inc. April 12, 1993. *Additional Environmental Assessment Report.* Chevron Service Station No. 9-4612, 3616 San Leandro Street, Oakland, California.

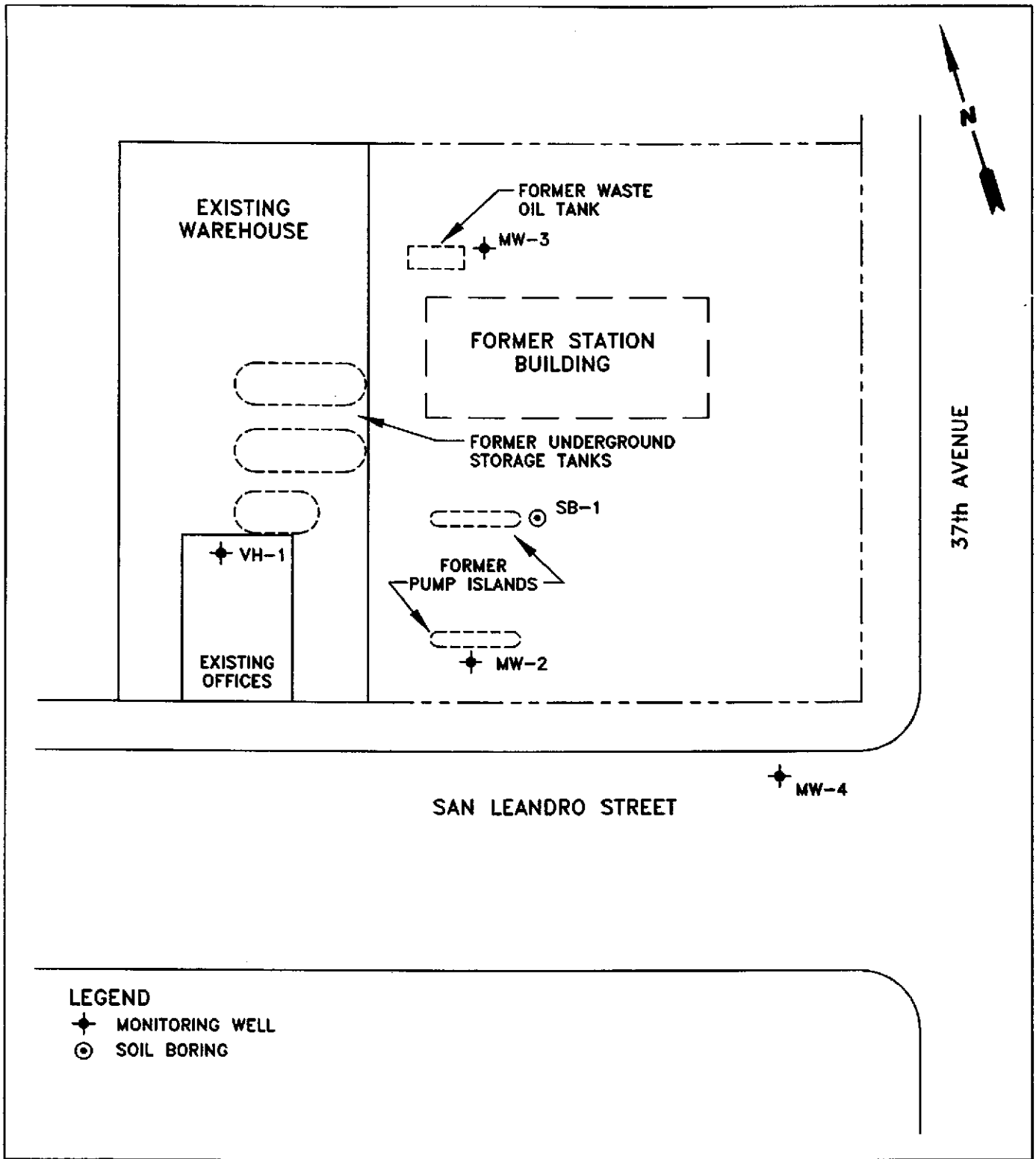
Groundwater Technology, Inc. March 25, 1994. *Work Plan for Additional Site Assessment.* Chevron Service Station No. 9-4612, 3616 San Leandro Street, Oakland, California.

Vonder Haar Hydrogeology. September 16, 1988. Former Chevron Service Station No. 9-4612, San Leandro St. and 37th, Oakland, California, VH Job No. 88-114.

FIGURES

1. Site Location Map
2. Site Plan

GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387	N	SCALE: 0 FEET 2000	**SITE LOCATION MAP**
		CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-4612	DATE: 4/12/93
		LOCATION: 3616 SAN LEANDRO STREET OAKLAND, CALIFORNIA	FIGURE: 1



GROUNDWATER TECHNOLOGY

0 FEET 30
SCALE

SITE PLAN

CLIENT: CHEVRON U.S.A. PRODUCTS CO SERVICE STATION NO. 9-4612	FILE: SP995	PROJECT NO: 020204530	PM MAR	RG/PE	
LOCATION: 3616 SAN LEANDRO AVENUE SAN LEANDRO, CALIFORNIA	REV: 0			FIGURE: 2	
	DES: MC	DET: CY	DATE: 9/29/95		

TABLES

TABLE 1
Analytical Results of Soil Samples

(Results expressed as milligrams per kilogram)

Chevron Service Station No. 9-4612
3616 San Leandro Street
Oakland, California

Date	Sample ID	Sample Depth (ft)[a]	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g
8-15-95	MW 4-16.5	16.5	<0.005	<0.005	<0.005	<0.005	<1
8-15-95	MW 4-21.5	21.5	<0.005	0.014	0.007	0.01	2
8-15-95	SB 1-21.5	21.5	<0.005	0.12	0.21	1.1	16

TPH-g = total petroleum hydrocarbons as gasoline
[a] = feet below surface grade

TABLE 2
Analytical Results of Groundwater Samples

(Results expressed as micrograms per liter)

Chevron Service Station No. 9-4612
3616 San Leandro Street
Oakland, California

Date	Sample ID	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g
8-22-95	MW-4	100	<10	<10	<10	9,600
8-15-95	SB-1	240	760	900	2,800	21,000

TPH-g = total petroleum hydrocarbons as gasoline

APPENDIX A

WELL INSTALLATION PERMIT

CITY OF OAKLAND

OFFICE OF PLANNING & BUILDING • 1330 BROADWAY • OAKLAND, CALIFORNIA 94612

Building Services Department

(510) 238-3102
TDD 839-6451
FAX: 238-3586

March 17, 1995

Mr. Tim Watchers
Groundwater Technology, Inc.
4057 Port Chicago Highway
Concord, CA 94520

Dear Mr. Watchers:

RE: MINOR ENCROACHMENT PERMIT FOR MONITORING WELL INSTALLATION WITHIN THE RIGHT OF WAY OF SAN LEANDRO STREET, OAKLAND

Enclosed are the Minor Encroachment Permit and Agreement and the Conditions for Granting a Minor Encroachment Permit allowing you to place one monitoring well within the public right of way area of San Leandro Street.

Before the permit will become effective, however, it must be signed by the person(s) having the legal authority to do so, properly notarized with notary acknowledgement slip(s) attached, and returned to this office to the attention of Roger Tam for recordation.

You must also obtain a street excavation permit from the Engineering Information Counter, 2nd Floor, 1330 Broadway, Oakland, prior to the start of the proposed work in the City right-of-way.

If you have any questions, please call Roger Tam at (510) 238-2110.

Very truly yours,

KAY WINER
Director of Planning & Building

By Philip A. Grubstick
PHILIP A. GRUBSTICK
Engineering Services Manager

Enclosures

RT:rt

file: sanlndro.mw\covr-ltr(7)

City of Oakland
Director of Planning & Building
1330 Broadway, 2nd Floor
Oakland, CA 94612

When Recorded Mail to:
Director of Planning & Building
City of Oakland
1330 Broadway, 2nd Floor
Oakland, CA 94612

TAX ROLL PARCEL NUMBER
(ASSESSOR'S REFERENCE NUMBER)

--	--	--	--
MAP	BLOCK	PARCEL	SUB

SPACE ABOVE FOR RECORDER'S USE ONLY

Address: San Leandro Street, Oakland

MINOR ENCROACHMENT PERMIT AND AGREEMENT

Chevron U.S.A. Products Company, a Division of Chevron U.S.A. Inc. is hereby granted a Conditional Revocable Permit to encroach into the public right of way area of San Leandro Street, Oakland with one monitoring well. The location of said encroachment shall be as delineated in Exhibit 'A' attached hereto and made a part hereof.

The permittee agrees to comply with and be bound by the conditions for granting an Encroachment Permit attached hereto and made a part hereof.

This agreement shall be binding upon the permitee described above, and their successors in interest thereof.

In witness whereof, I, the authorized representative of Chevron U.S.A. Products Company, have set my signature this 10TH day of MAY, 1995.

CHEVRON U.S.A. PRODUCTS CO.

Name: MARK A. MILLER
Title: SAR ENGINEER

<-- Please attach California all-purpose acknowledgment slip here

-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --

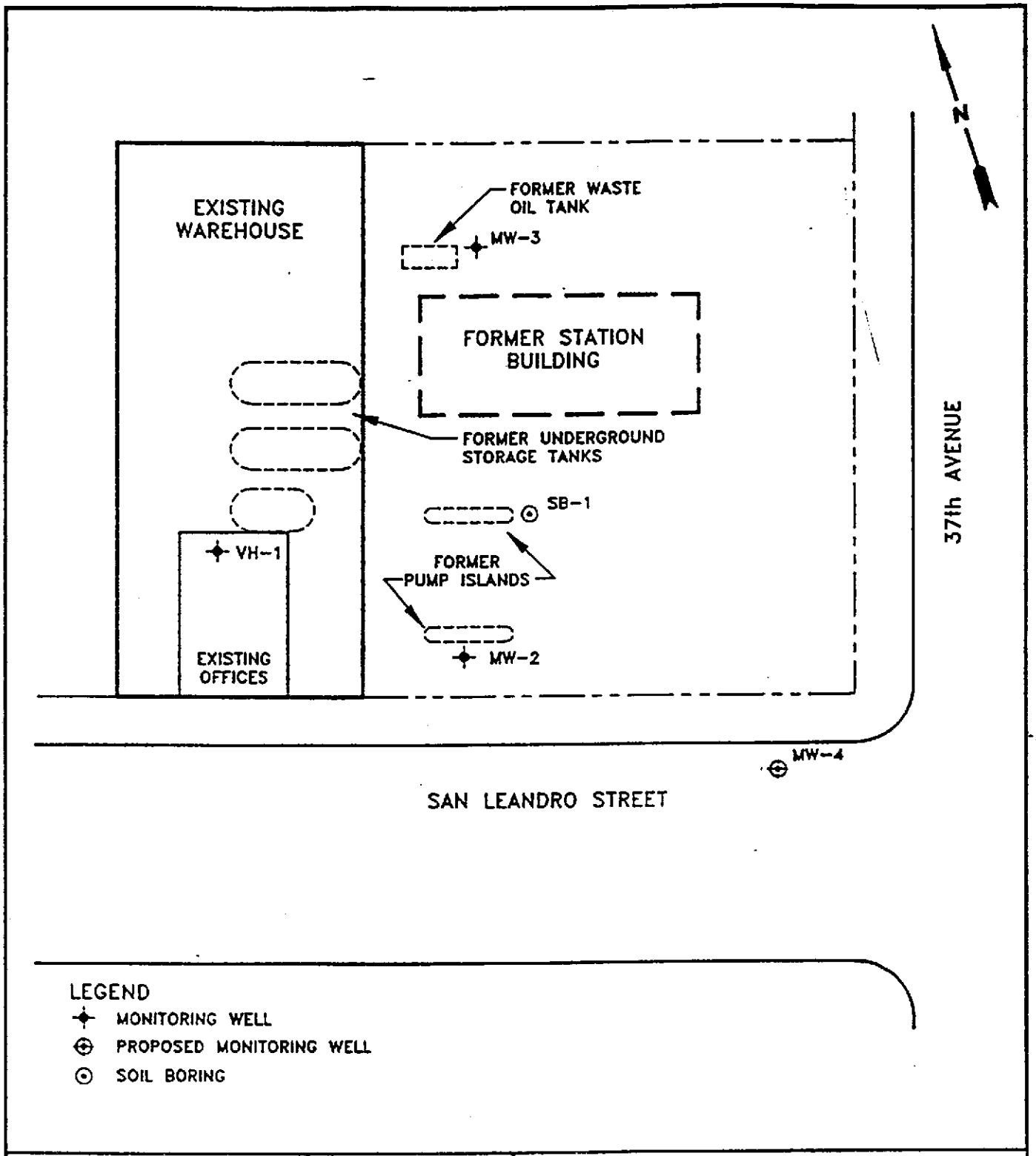
BELOW FOR OFFICIAL USE ONLY

CITY OF OAKLAND

Dated_____

By:_____
CALVIN N. WONG
Deputy Director
Building Services
For
KAY WINER
Director of Planning & Building

RT:rt
file: sanlndro.mw\per&agrt(7)



LEGEND

- MONITORING WELL
- PROPOSED MONITORING WELL
- SOIL BORING

GROUNDWATER TECHNOLOGY

0 FEET 30
SCALE

SITE PLAN
(REVISED 8-10-95)

CLIENT: CHEVRON U.S.A. PRODUCTS CO SERVICE STATION NO. 9-4612	FILE: SP394		PROJECT NO: 20202892	PM:	RG/PE:
LOCATION: 3616 SAN LEANDRO STREET OAKLAND, CA.	REV: 0				FIGURE: 2
	DES: MC	DET: CY	DATE: 3/25/94		

CITY OF OAKLAND • Office of Planning and Building
1339 Broadway, 2nd Floor, Oakland, CA 94612 • Phone: (510) 238-3443 • FAX (510) 238-3586
PERMIT

EXCAVATION

Job Site 3616 SAN LEANDRO ST Parcel# 033 -2178-010-00 Appl# X9500254

Descr EXCAVATION PERMIT FOR MONITORING WELL IN SAN LEANDRO ST Filed 05/18/95
SOUTHWEST CORNER OF SAN LEANDRO AND 37TH ST

Work Type EXCAVATION-PRIVATE P

USA # Dept Co. Job # Agency
Util Fund #:

Applicnt Phone# Lic# & License Classes--

Owner CHEVRON USA PRODUCTS CO.
Contractor SOILS EXPLORATION SERVICES INC X (707)451-9213 582696 C57
Arch/Engr
Agent TIM WATCHERS (415)671-2387
Applic Addr 561 BUCKEYE ST, VACAVILLE, CA, 95688

$235.00 TOTAL FEES PAID AT FILING $.00 TOTAL FEES PAID AT ISSUANCE

$40.00 Applic $195.00 Permit
$.00 Process $.00 Rec Mgmt
$.00 Gen Plan $.00 Investg
$.00 Other

CITY OF OAKLAND • Office of Planning and Building
1330 Broadway, 2nd Floor, Oakland, CA 94612 • Phone: (510) 238-3443 • FAX (510) 238-3586
PERMIT

4777

JOAN   ROGER TAM
(510) 238 6314

EXCAVATION

Job Site 3616 SAN LEANDRO ST   Parcel# 033 -2178-010-00   Appl# X9500254

Descr EXCAVATION PERMIT FOR MONITORING WELL IN SAN LEANDRO ST;   Filed 05/18/95
SOUTHWEST CORNER OF SAN LEANDRO AND 37TH ST

EXCU
APPL 40.00
SUBTL 235.00
CHECK 235.00
ITEM
COL 0274 13:34TM

Work Type EXCAVATION-PRIVATE P   05-18-95

USA #   Util Co. Job #   Acct#:
Util Fund #:

CK 230 –
Cash 5 –

		Applcnt	Phone#	Lic#	--License Classes--
Owner	CHEVRON USA PRODUCTS CO.				
Contractor	SOILS EXPLORATION SERVICES INC	X	(707)451-9213	582696	C57
Arch/Engr					
Agent	TIM WATCHERS		(415)671-2387		
Applic Addr	561 BUCKEYE ST, VACAVILLE, CA, 95688				

$235.00 TOTAL FEES PAID AT FILING $.00 TOTAL FEES PAID AT ISSUANCE

$40.00 Applic $195.00 Permit
$.00 Process $.00 Rec Mgmt
$.00 Gen Plan $.00 Invstg
$.00 Other

CITY OF OAKLAND

Engineering Services Info
1330 Broadway, 2nd Flr
Oakland, CA 94612
(510) 238-4777

EXCAVATION PERMIT

TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

PERMIT NUMBER	SITE ADDRESS/LOCATION
X9500254	3616 San Leandro St.
APPROX. START DATE / APPROX. END DATE	24-HOUR EMERGENCY PHONE NUMBER (Permit not valid without 24-Hour number)
CONTRACTOR'S LICENSE # AND CLASS	CITY BUSINESS TAX #

ATTENTION:

State law requires that the contractor/owner call *Underground Service Alert (USA)* two working days before excavating. This permit is not valid unless applicant has secured an inquiry identification number issued by USA. The USA telephone number is 1 (800) 642-2444.
UNDERGROUND SERVICE ALERT (USA) #: 95963

48 hours prior to starting work, you must call (510) 238-3651 to schedule an inspection.

OWNER/BUILDER

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5 Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as an owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business & Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption on this subdivision on more than two structures more than once during any three-year period. (Sec. 7044 Business and Professions Code).

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project, (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License law).

☐ I am exempt under Sec. _____, B&PC for this reason _____.

WORKER'S COMPENSATION

☐ I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, Labor Code).

Policy # _____ Company Name _____

☒ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation Laws of California (not required for work valued at one hundred dollars ($100) or less).

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked. This permit is issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code. It is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims, or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance. This permit is void 90 days from the date of issuance unless an extension is granted by the Director of the Office of Planning and Building.

I hereby affirm that I am licensed under provisions of Chapter 9 of Division 3 of the Business and Professions Code and my license is in full force and effect (if contractor), that I have read this permit and agree to its requirements, and that the above information is true and correct under penalty of law.

J. Watchin — 5/18/95

Signature of Permittee ☒ Agent for ☒ Contractor ☐ Owner — Date

DATE STREET LAST RESURFACED	SPECIAL PAVING DETAIL REQUIRED? ☐ YES ☒ NO	HOLIDAY RESTRICTION? (NOV 1 - JAN 1) ☐ YES ☒ NO	LIMITED OPERATION AREA? (7AM-9AM & 4PM-6PM) ☒ YES ☐ NO
—			

ISSUED BY	DATE ISSUED
James M. Bond	5/18/95

1330 Broadway, 2nd Floor, Oakland, CA 94612 • Phone: (510) 238-3443 • FAX (510) 238-3586

PERMIT

EXCAVATION

Job Site 3616 SAN LEANDRO ST   Parcel# 033-2178-010-00   Appl# X9500254

Descr EXCAVATION PERMIT FOR MONITORING WELL IN SAN LEANDRO ST; SOUTHWEST CORNER OF SAN LEANDRO AND 37TH ST   Filed 05/18/95

EXCV 195.00
APPL 40.00
SUBTL 235.00
CHECK 235.00
ITEM 0274 [illegible]

Work Type EXCAVATION-PRIVATE P

USA #   Util Co. Job #   Acct# [illegible]
Util Fund #:

CK 230 –
Cash 5 –

Applcnt   Phone#   Lic#   --License Classes--

Owner CHEVRON USA PRODUCTS CO
Contractor SOIL EXPLORATION SERVICES INC   X   (707)45[illegible]-9213 552696 C57
Arch/Engr
Agent TIM [illegible]   (415)67[illegible]-2387
Applic Addr [illegible], CA 95[illegible]8

$235.00 TOTAL [illegible] FILING $.00 TOTAL FEES PAID AT ISSUANCE
$40.00 Applic $195.00 Permit
$.00 Process $.00 Rec Mgmt
$.00 Gen Plan $.00 Invstg
$.00 Other

CITY OF OAKLAND

CITY OF OAKLAND
NO REFUND W/O RECPT
05-18-95 #1
EXCV 195.00
APPL 40.00
SUBTL 235.00
CHECK 235.00
CK 230 – cash 5
ITEM 2
2CL 0274 13:34TM

State of California
County of Contra Costa

On May 10, 1995 (DATE) before me, Susan R Weber Notary Public (NAME/TITLE OF OFFICER-i.e."JANE DOE, NOTARY PUBLIC")

personally appeared MARK Miller (NAME(S) OF SIGNER(S))

● personally known to me - OR - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

OFFICIAL SEAL
SUSAN R. WEBER
Notary Public-California
CONTRA COSTA COUNTY
My Commission Expires
June 30, 1995

Witness my hand and official seal.

(SEAL)

Susan R Weber
(SIGNATURE OF NOTARY)

RIGHT THUMBPRINT (Optional)

TOP OF THUMB HERE

CAPACITY CLAIMED BY SIGNER(S)
☐INDIVIDUAL(S)
☐CORPORATE _____
OFFICER(S) _____ (TITLES)
☐PARTNER(S) ☐LIMITED ☐GENERAL
☐ATTORNEY IN FACT
☐TRUSTEE(S)
☐GUARDIAN/CONSERVATOR
●OTHER: SAR Engineer

SIGNER IS REPRESENTING:
(Name of Person(s) or Entity(ies))
Chevron USA

RIGHT THUMBPRINT (Optional)

TOP OF THUMB HERE

CAPACITY CLAIMED BY SIGNER(S)
☐INDIVIDUAL(S)
☐CORPORATE _____
OFFICER(S) _____ (TITLES)
☐PARTNER(S) ☐LIMITED ☐GENERAL
☐ATTORNEY IN FACT
☐TRUSTEE(S)
☐GUARDIAN/CONSERVATOR
☐OTHER: _____

SIGNER IS REPRESENTING:
(Name of Person(s) or Entity(ies))

ATTENTION NOTARY

The information requested below and in the column to the right is OPTIONAL. Recording of this document is not required by law and is also optional. It could, however, prevent fraudulent attachment of this certificate to any unauthorized document.

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED AT RIGHT:

Title or Type of Document: Minor Encroachment

Number of Pages _____ Date of Document _____

Signer(s) Other Than Named Above _____

7 67775 63237 8

APPENDIX B

DRILL LOGS AND WELL CONSTRUCTION SPECIFICATIONS

Drilling Log

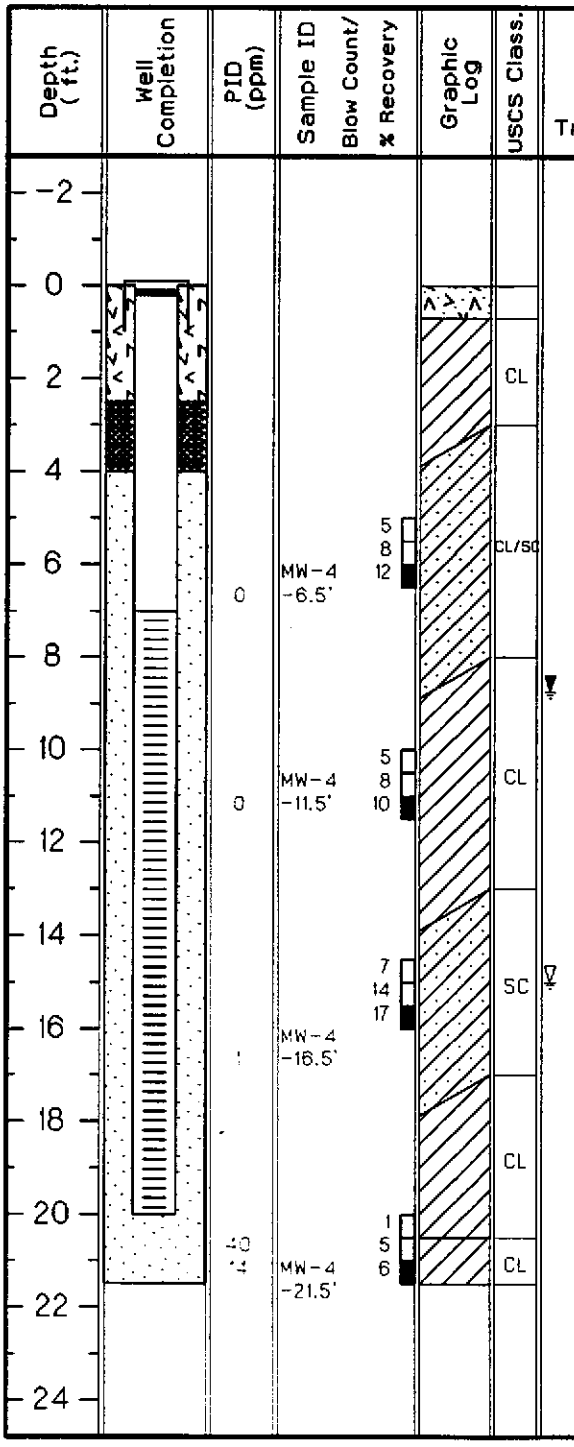
GROUNDWATER TECHNOLOGY

Monitoring Well **MW-4**

Project *Chevron – Oakland* Owner *Chevron USA Products Company*
Location *3616 San Leandro Street, Oakland, CA* Proj. No. *02020 4530*
Surface Elev. *27.68 ft.* Total Hole Depth *21.5 ft.* Diameter *8 in.*
Top of Casing *27.27 ft.* Water Level Initial *15 ft.* Static *8.76 ft.*
Screen: Dia *2 in.* Length *13 ft.* Type/Size *Sch 40 PVC/0.020 in.*
Casing: Dia *2 in.* Length *7 ft.* Type *Sch 40 PVC*
Fill Material *Neat Cement* Rig/Core *CME-55/Modified Split-Spoon*
Drill Co. *SES, Inc.* Method *Hollow Stem Auger/PID*
Driller *Morris Peterson* Log By *Brian McAloon* Date *08/15/95* Permit # *95503*
Checked By *Ed Simonis* License No. *RG#4422* Ed

See Site Map For Boring Location

COMMENTS:



Description

(Color, Texture, Structure)
Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%

8" concrete.

Silty CLAY (15,85): brown, dry.

Pebbly sandy CLAY (20,30,50): brown, dry, no hydrocarbon odor.

Static water, 08/15/95, 1400 hrs.

Pebbly sandy CLAY (10,40,50): brown, dry, no hydrocarbon odor.

Pebbly silty clayey SAND (15,25,30,30): brown, moist, no hydrocarbon odor.

Encountered water (driller's call), 08/15/95, 1255 hrs.

Silty CLAY (40,60): brown, moist, slight hydrocarbon odor.

Pebbly sandy silty CLAY (10,20,20,50): brown with orange and gray mottling, moist, hydrocarbon odor.

End of boring. Installed groundwater monitoring well.

Drilling Log

GROUNDWATER TECHNOLOGY

Soil Boring **SB-1**

Project Chevron - Oakland — Owner Chevron USA Products Company
Location 3616 San Leandro Street, Oakland, CA — Proj. No. 02020 4530
Surface Elev. ____ Total Hole Depth 21.5 ft. Diameter 8 in.
Top of Casing ____ Water Level Initial 15 ft. Static 18.35 ft.
Screen: Dia ____ Length ____ Type/Size ____
Casing: Dia ____ Length ____ Type ____
Fill Material Neat Cement — Rig/Core CME-55/Modified Split-Spoon
Drill Co. SES, Inc. — Method Hollow Stem Auger/PID
Driller Morris Peterson — Log By Brian McAloon — Date 08/15/95 — Permit # 95503
Checked By Ed Simonis — License No. RG#4422 EH

See Site Map For Boring Location

COMMENTS:

"GRAB" groundwater samples collected.

Depth (ft.)	PID (ppm)	Sample ID	Blow Count / % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
0					CL	Top soil and weeds. Sandy CLAY (20,80): brown.
4					CL	Pebbly sandy CLAY (5,20,75): brown, dry, no hydrocarbon odor.
6	0	SB-1 -6.5'	8 8 12			
8					SM	Clayey silty pebbly SAND (10,10,20,60): brown, damp, no hydrocarbon odor, grading to clayey sandy pebbly (up to 30mm) SILT (10,10,30,50): brown, dry to damp, no hydrocarbon odor.
10	0	SB-1 -11.5'	8 11 14			
12					ML	
14						
16	9	SB-1 -16.5'	3 4 9		SC	*Encountered water (driller's call), 08/15/95* Pebbly clayey SAND (10,30,60): brown with 5% gray staining along rootlet casts, damp to moist, no hydrocarbon odor.
18						*Static water, 08/15/95, 0953 hrs.*
20			2 4		CL	Sandy silty CLAY (10,30,60): light brown with 5% light gray mottling, moist to wet, slight hydrocarbon odor.
22	3.75 170	SB-1 -21.5'	5			End of boring. Backfilled with grout 08/15/95.
24						

APPENDIX C

GROUNDWATER TECHNOLOGY'S STANDARD OPERATING PROCEDURES (SOPs)

GROUNDWATER TECHNOLOGY, INC.
STANDARD OPERATING PROCEDURE NO. 8
GROUNDWATER MONITORING

Groundwater monitoring of wells at the site shall be conducted using an ORS Environmental Equipment (ORS) INTERFACE PROBE™ or SURFACE SAMPLER™. The INTERFACE PROBE™ is a hand-held, battery-operated device for measuring depth to petroleum product and depth to water as measured from an established datum (*i.e.*, top of the well casing which has been surveyed). Floating separate-phase hydrocarbon (product) thickness is then calculated by subtracting the depth to product from the depth to water. In addition, water elevations are adjusted for the presence of floating product with the following calculation:

(Product Thickness) x (0.8) + (Water Elevation) = Corrected Water Elevation

Note: The factor of 0.8 accounts for the density difference between water and petroleum hydrocarbons.

The thickness of dense non-aqueous phase liquids (DNAPLs) is calculated by subtracting the depth at which the DNAPL is encountered from the total depth of the well. Water-level elevations are not typically corrected for the presence of DNAPLs.

The INTERFACE PROBE™ consists of a dual-sensing probe which utilizes an optical liquid sensor and electrical conductivity to distinguish between water and petroleum products. A coated steel measuring tape transmits the sensor's signals to the reel assembly where an audible alarm sounds a continuous tone when the sensor is immersed in petroleum product and an oscillating tone when immersed in water. The INTERFACE PROBE™ is accurate to 0.01 inch.

A SURFACE SAMPLER™ shall be used for visual inspection of the groundwater to note sheens (difficult to detect with the INTERFACE PROBE™), odors, microbial action, etc.

The SURFACE SAMPLER™ used consists of a 12-inch-long case acrylic tube with a Delrin ball which closes onto a conical surface creating a seal as the sampler is pulled up. The sampler is calibrated in inches and centimeters for visual inspection of product thickness.

To reduce the potential for cross contamination between wells, the monitoring shall take place in order from the least to the most contaminated wells. Wells containing separate-phase hydrocarbons (free product) should be monitored last. Between each monitoring the equipment shall be washed with laboratory-grade detergent and double rinsed with distilled water.

GROUNDWATER TECHNOLOGY, INC.
STANDARD OPERATING PROCEDURE NO. 9
WATER SAMPLING METHODOLOGY

Before water sampling, each well shall be purged by pumping a minimum of four well volumes or until the discharge water indicates stabilization of temperature conductivity and pH. If the well is evacuated before four well volumes are removed or stabilization is achieved, the sample should be taken when the water level in the well recovers to 80 percent of its initial level.

Retrieval of the water sample, sample handling and sample preservation shall be conducted according to Standard Operating Procedure 10 concerning "Sampling for Volatiles in Water." The sampling equipment used shall consist of a Teflon® and/or stainless steel samplers which meet U.S. Environmental Protection Agency (EPA) regulations. Glass vials with Teflon® lids should be used to store the collected samples.

To ensure sample integrity, each vial shall be filled with the sampled water in such a way that the water stands above the lip of the vial. The cap should then be quickly placed on the vial and tightened securely. The vial should then be checked to ensure that air bubbles are not present prior to labeling of the sample. Label information should include a sample identification number, job identification, date, time, type of analysis requested, and sampler's name. Chain-of-custody records shall be completed according to Standard Operating Procedure (SOP) 11 concerning chain of custody.

The vials should be immediately placed in high quality coolers for shipment to the laboratory. The coolers should be packed with sufficient ice or freezer packs to ensure that the samples are kept below 4° Celsius (C). To minimize sample degradation the prescribed analysis shall take place within seven days of sample collection unless specially prepared acidified vials are used.

To minimize the potential for cross contamination between wells, all the well development and water sampling equipment which contacts the groundwater shall be cleaned between each sampling. As a second precautionary measure, the wells shall be sampled in order of increasing contaminant concentrations (the least contaminated well first, the most contaminated well last) as established by previous analysis.

GROUNDWATER TECHNOLOGY, INC.
STANDARD OPERATING PROCEDURE NO. 10
SAMPLING FOR VOLATILES IN WATER (DISSOLVED GASOLINE, SOLVENTS, ETC.)

1. Use only vials properly washed and oven dried (prepared by the laboratory).

2. Use clean sampling equipment. Scrub with Alconox or equivalent laboratory detergent and water followed by a thorough water rinse. Complete with a distilled water rinse.

   Sampling equipment which has come into contact with liquid hydrocarbons (free product) should be regarded with suspicion. Such equipment should have tubing and cables replaced and all resilient parts washed with laboratory detergent solution as indicated above. Visible deposits may have to be removed with hexane. Solvent washing should be followed by detergent washing, as indicated above.

   This procedure is valid for volatile organic analysis only. For extractable organics (for example, pesticides, or base neutrals for U.S. Environmental Protection Agency [EPA] Method 625 a final rinse with pesticide-grade isopropyl alcohol), followed by overnight or oven drying will be necessary.

3. Take duplicate samples. Mark on forms as a single sample with two containers to avoid duplication of analyses.

4. Take a site blank using distilled water or known uncontaminated source. This sample will be run at the discretion of the project manager.

5. Fill out labels and forms as much as possible ahead of time. Use an indelible marker.

6. Preservatives are required for some types of samples. Use specially prepared vials marked as indicated below, or use the appropriate field procedure (SOP 12 for acidification). Make note on forms that samples were preserved. Always have extra vials in case of problems. Samples for volatile analyses should be acidified below pH 2. Eye protection, foot protection, and disposable vinyl gloves are required for handling. Samples designated for expedited service and analyzed within seven (7) days of sampling will be acceptable without preservation. Glasses or goggles (not contact lenses) are necessary for protection of the eyes. Flush eyes with water for 15 minutes if contact occurs and seek medical attention. Rinse off hands frequently with water during handling.

   For sampling chlorinated drinking water supplies for chlorinated volatiles, samples shall be preserved with sodium thiosulfate. Use vials labeled "CONTAINS THIOSULFATE." No particular cautions are necessary.

7. Fill vial to overflowing with water, avoiding turbulence and bubbling as much as possible. Water should stand above lip of vial.

8. Carefully, but quickly, slip cap onto vial. Avoid dropping the Teflon® septum from cap by not inverting cap until it is in contact with the vial. Disc should have Teflon® face toward the water. Also avoid touching white Teflon® face with dirty fingers.

9. Tighten cap securely, invert vial, and tap against hand to see there are not bubbles inside.

10. Label vial, using indelible ink, as follows:

    A. Sample I.D. No.
    B. Job I.D. No.
    C. Date and Time
    D. Type of analysis required
    E. Your name

11. Unless the fabric-type label is used, place Scotch™ tape over the label to preserve its integrity.

12. For chain-of-custody reasons, sample vial should be wrapped end-for-end with Scotch™ tape or evidence tape and signed with indelible ink where the end of the tape seals on itself. The septum needs to be covered.

13. Chill samples immediately. Samples to be stored should be kept at 4° Celsius (C) (39.2° Fahrenheit [F]). Samples received at the laboratory above 10° C (as measured at glass surface by a thermocouple probe), after overnight shipping, will be considered substandard, so use a high quality cooler with sufficient ice or freezer packs.

14. Fill out Chain-of-Custody Manifest and Analysis Request Form (see Chain of Custody Procedures, SOP 11).

GROUNDWATER TECHNOLOGY, INC.
STANDARD OPERATING PROCEDURE NO. 11
CHAIN-OF-CUSTODY PROTOCOL

1. Samples must be maintained under custody until shipped or delivered to the laboratory. The laboratory will then maintain custody. A sample is under custody if:

    a) It is in your possession
    b) It is in your view after being in your possession
    c) You locked it up after it was in your possession
    d) It is in a designated secure area

2. Custody of samples may be transferred from one person to another. Each transferrer and recipient must date, sign and note the time on the chain-of-custody form.

3. In shipping, the container must be sealed with tape, and bear the sender's signature across the area of bonding at the ends of the tape to prevent undetected tampering. Each sampling jar should be taped and signed as well. Scotch tape works well.

4. Write "sealed by" and sign in the "Remarks" box at the bottom of the form before sealing the box. Place form in a plastic bag and seal it inside the box.

5. The "REMARKS" section of the form is for documenting details such as:

    a) Correlation of sample numbers if samples are split between labs.
    b) QC numbers when lab is logging in the samples.
    c) Sample temperature and condition when received by lab.
    d) Preservation notation.
    e) pH of samples when opened for analysis (if acidified).
    f) Sampling observation or sampling problem.

6. The chain-of-custody form should be included inside the shipping container. A copy should be sent to the project manager.

7. When the samples are received by the lab, the chain-of-custody form will be dated, signed, and the time noted by a laboratory representative. The form will be retained in the laboratory files along with shipping bills and receipts .

8. At the time of receipt of samples by the laboratory, the shipping container will be inspected and the sealing signature will be checked. The samples will be inspected for condition and bubbles, and the temperature of a representative sample container will be measured

externally by a thermocouple probe (held tightly between two samples) and recorded. The laboratory QC numbers will be placed on the labels, in the accession log, and on the chain-of-custody form. If samples are acidified, their pH will be measured by narrow range pH paper at the time of opening for analysis. All comments concerning procedures requiring handling of the samples will be dated and initialed on the form by the laboratory person performing the procedure. A copy of the completed chain-of-custody form with the comments on sample integrity will be returned to the sampler.

GROUNDWATER TECHNOLOGY, INC.
STANDARD OPERATING PROCEDURE NO. 14
SOIL SAMPLING METHODOLOGY

1. Soil samples should be collected and preserved in accordance with Groundwater Technology Standard Operating Procedure (SOP 15) concerning Soil Sample Collection and Handling when Sampling for Volatile Organics. A hollow stem soil auger should be used to drill to the desired sampling depth. A standard 2 inch diameter split spoon sampler 18 inches in length shall be used to collect the samples. The samples are contained in 2 inch diameter by 6 inch long thin walled brass tube liners fitted into the split spoon sampler (three per sampler).

2. The split spoon sampler should be driven the full depth of the spoon into the soil by a 140 pound hammer. The spoon shall then be extracted from the borehole and the brass tube liners containing the soil sample removed from the sampler. The ends of the liner tubes should be immediately covered with aluminum foil, sealed with a teflon or plastic cap, and taped with duct tape. After being properly identified with sample data entered on a standard chain of custody form the samples shall be placed on dry ice (maintained below 4~C) and transported to the laboratory within 24 hours.

3. One of the three soil samples retrieved at each sample depth shall be analyzed in the field using a photoionization detector and/or explosimeter. The purpose of the field analysis is to provide a means to choose samples to be laboratory analyzed for hydrocarbon concentrations and to enable comparisons between the field and laboratory analyses. The soil sample shall be sealed in a plastic bag and allowed to equilibrate with the air surrounding the soil for approximately 10 minutes. One of the two field vapor instruments shall be used to quantify the amount of hydrocarbon released to the air from the soils. The data shall be recorded on the drill logs at the depth corresponding to the sample point.

GROUNDWATER TECHNOLOGY, INC.
STANDARD OPERATING PROCEDURE NO. 15
SOIL SAMPLE COLLECTION AND HANDLING WHEN SAMPLING FOR VOLATILE ORGANICS

1. Use a sampling means which maintains the physical integrity of the samples. The project sampling protocol will designate a preferred sampling tool. A split spoon sampler with liners, or similar tube sampler which can be sealed, is best.

2. The samples should be sealed in the liner, with teflon plugs (The "California Sampler") or plastic caps.

3. For sending whole-core samples (above):

   A. Seal ends of liner with teflon plugs or plastic caps, leaving no free air space inside.

   B. Tape with duct tape.

   C. Label the sample with the following information: sample identification, depth, date and time, project number and required analyses.

   D. Place in plastic bag labeled with indelible marker. Use Well #, depth, date, and job #.

   E. Place inside a second bag and place a labelling tag inside outer bag.

   F. Enclose samples in a cooler with sufficient ice or dry ice to maintain samples at 4 degrees C during shipment.

   G. Seal cooler with a lock, or tape with samplers signature so tampering can be detected.

   H. Package cooler in a box with insulating material. Chain of custody forms can be placed in a plastic bag in this outer box.

   I. If dry ice is used, a maximum of 5 pounds is allowed by Federal Express without special documents(documents are easy to obtain but are not necessary for under 5 pounds). Write "ORM-A dry ice", "_____ pounds, for research" on outside packaging and on regular airbill under classification. UPS does not accept dry ice.

J. Soil cores kept a 4 degrees C are only viable for up to 7 days when aromatic hydrocarbons are involved. The lab should prepare the samples in methanol once in the lab.

4. Good sampling practice would include preparing 1 out of 5 samples to be prepared in duplicates for analysis. These 4 out of 20 samples will be used for the following purposes:

   A. One in every 20 samples should be analyzed as a field replicate to evaluate the precision of the sampling technique. A minimum of 1 sample per data set is suggested.

   B. An additional 1 in 20 samples should be selected by sampler to be prepared in duplicate as alternative to Step (A). Choose a different soil type if available.

   C. The remaining 2 in 20 samples should be used by lab for spiking with reference materials for internal QC.

   Other QC procedures can be specified at the project manager's discretion. See Table 3-2 (reference 2) attached.

5. Decontamination of equipment in the field requires a detergent wash, with a distilled water rinse.

REFERENCES

1. Soil Sampling Quality Assurance Users Guide, U.S. EPA Environmental Monitoring Systems Laboratory, Las Vegas, NV, EPA 600/4-84-043, May 1984.

2. Preparation of Soil Sampling Protocol. Techniques and Strategies, U.S. EPA, Environmental Monitoring Systems Laboratory, Las Vegas, NV, EPA 600/4-83-020, August 1983 (PB83-206979).

3. Test Methods for Evaluating Solid Waste, U.S. EPA, Office of Solid Waste and Emergency Response, Washington, D.C., SW 846, July 1982.

GROUNDWATER TECHNOLOGY, INC.
STANDARD OPERATING PROCEDURE NO. 19
OPERATION/CALIBRATION OF PHOTOIONIZATION ANALYZER

1. The Thermo Environmental Instruments Inc. Model 580B OVM Photoionization Analyzer shall be used, using photoionization, to measure the concentration of trace gases over a range of less than 1 ppm to 2,000 ppm. The specific instrument used for investigations related to hydrocarbon contamination should be calibrated for direct readings in parts per million (ppm) volume/volume of isobutylene. Specifics of the detection principle/theory and functions of various components can be found in the manufactures instruction manual.

2. To assure optimum performance, the photoionization analyzer should be calibrated with a standard gas mixture of known concentration from a pressurized container. A daily procedure for calibration involves bringing the probe and readout close to the calibration gas, cracking the valve on the tank and checking the instrument reading. This provides a useful spot check for the instrument.

3. A procedure conducted weekly for more accurate calibration of the instrument from a pressurized container is to connect one side of a "T" to the pressurized container of calibration gas, another side of the "T" to a rotameter and the third side of the "T" directly to the 8" extension to the photoionization probe (see Figure 2). Crack the valve of the pressurized container until a slight flow is indicated on the rotameter. The instrument draws in the volume of sample required for detection, and the flow in the rotameter indicates an excess of sample. Now adjust the span pot so that the instrument reads the exact value of the calibration gas. (If the instrument span setting is changed, the instrument should be turned back to the standby position and the electronic zero should be readjusted, if necessary).

APPENDIX D

LABORATORY REPORTS
AND
CHAIN-OF-CUSTODY RECORDS

Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

GROUNDWATER TECHNOLOGY, INC.
4057 PORT CHICAGO HWY.
CONCORD, CA 94520

Date: August 24, 1995

Attn: MIKE CHAMBERLIN

Laboratory Number : 82283

Project Number/Name : 020204530

This report has been reviewed and

approved for release.

Senior Chemist
Account Manager

Certified Laboratories

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Martinez, California 94553
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Superior Precision Analytical, Inc.
A member of ESSCON Environmental Support Service Consortium

GROUNDWATER TECHNOLOGY, INC.
Attn: MIKE CHAMBERLIN

Project 020204530
Reported on August 24, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Chronology

Laboratory Number 82283

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
SB1-21.5	08/15/95	08/17/95	08/22/95	08/22/95	BH221.05	04
MW4-16.5	08/15/95	08/17/95	08/22/95	08/22/95	BH221.05	07
MW4-21.5	08/15/95	08/17/95	08/22/95	08/22/95	BH221.05	08
SP-1,2	08/15/95	08/17/95	08/22/95	08/22/95	BH221.05	09
SB1-GW	08/15/95	08/17/95	08/23/95	08/23/95	BH231.04	10

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
BH221.05-01	Method Blank	MB		Soil	08/22/95	08/22/95
BH221.05-03	CASBV-BV5L-02-01	MS	82289-04	Soil	08/22/95	08/22/95
BH221.05-04	CASBV-BV5L-02-01	MSD	82289-04	Soil	08/22/95	08/22/95
BH231.04-25	Method Blank	MB		Water	08/23/95	08/23/95
BH231.04-32	MW-4	MS	20006-01	Water	08/23/95	08/23/95
BH231.04-33	MW-4	MSD	20006-01	Water	08/23/95	08/23/95
BH221.05-05	CASBV-BV5L-02-01	MS	82289-04	Soil	08/22/95	08/22/95
BH221.05-06	CASBV-BV5L-02-01	MSD	82289-04	Soil	08/22/95	08/22/95

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Project 020204530
Reported on August 24, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82283-04	SB1-21.5	Soil	1.0	-
82283-07	MW4-16.5	Soil	1.0	-
82283-08	MW4-21.5	Soil	1.0	-
82283-09	SP-1,2	Soil	1.0	-

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

Compound	82283-04 Conc. mg/kg	82283-04 RL	82283-07 Conc. mg/kg	82283-07 RL	82283-08 Conc. mg/kg	82283-08 RL	82283-09 Conc. mg/kg	82283-09 RL
Gasoline_Range	16	1	ND	1	2	1	ND	1
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	0.12	0.005	ND	0.005	0.014	0.005	ND	0.005
Ethyl Benzene	0.21	0.005	ND	0.005	0.007	0.005	ND	0.005
Xylenes	1.1	0.005	ND	0.005	0.010	0.005	ND	0.005
> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	310i		100		161i		107	

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Project 020204530
Reported on August 24, 1995

Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
82283-10	SB1-GW	Water	200.0	-

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

Compound	82283-10 Conc. ug/L	RL
Gasoline_Range	21000	10000
Benzene	240	100
Toluene	760	100
Ethyl Benzene	900	100
Xylenes	2800	100
> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	106	

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Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 82283
Method Blank(s)

	BH221.05-01		BH231.04-25	
	Conc.	RL	Conc.	RL
	mg/kg		ug/L	
Gasoline_Range	ND	1	ND	50
Benzene	ND	0.005	ND	0.5
Toluene	ND	0.005	ND	0.5
Ethyl Benzene	ND	0.005	ND	0.5
Xylenes	ND	0.005	ND	0.5
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	100		102	

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Gasoline Range Petroleum Hydrocarbons and BTXE
by EPA SW-846 5030/8015M/8020
Gasoline Range quantitated as all compounds from C6-C10

Quality Assurance and Control Data

Laboratory Number: 82283

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (mg/kg) BH221.05 03 / 04 - Sample Spiked: 82289 - 04						
Benzene	ND	2.000	2.0/1.9	100/95	65-135	5
Toluene	0.053	2.000	2.1/2.0	102/97	65-135	5
Ethyl Benzene	0.081	2.000	2.1/2.0	101/96	65-135	5
Xylenes	0.70	6.000	6.9/6.7	103/100	65-135	3
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				97/92	50-150	
For Water Matrix (ug/L) BH231.04 32 / 33 - Sample Spiked: 20006 - 01						
Gasoline_Range	ND	320	390/410	122/128	65-135	5
Benzene	ND	20	21/20	105/100	65-135	5
Toluene	ND	20	22/21	110/105	65-135	5
Ethyl Benzene	ND	20	22/21	110/105	65-135	5
Xylenes	ND	60	64/62	107/103	65-135	4
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				101/100	50-150	
For Soil Matrix (mg/kg) BH221.05 05 / 06 - Sample Spiked: 82289 - 04						
Gasoline_Range	170	200	350/370	90/100	65-135	11

Certified Laboratories

825 Arnold Dr., Suite 114
Martinez, California 94553
(510) 229-1512 / fax (510) 229-1526

1555 Burke St., Unit I
San Francisco, California 94124
(415) 647-2081 / fax (415) 821-7123

309 S. Cloverdale St., Suite B-24
Seattle, Washington 98108
(206) 763-2992 / fax (206) 763-8429

Narrative:

- The surrogate recovery was high due to the presence of interfering compounds in the sample.

Definitions:

ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

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82283

Fax copy of Lab Report and COC to Chevron Contact: ☐ No

Chain-of-Custody-Record

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

Chevron Facility Number: 9-4612
Facility Address: 3616 SAN LEANDRO ST, OAKLAND, CA
Consultant Project Number: 020204530
Consultant Name: GROUNDWATER TECHNOLOGY
Address: 4057 PORTCHICAGO HWY, CONCORD, CALIF.
Project Contact (Name): MIKE CHAMBERLAIN
(Phone): 510-671-2387 (Fax Number): 510-685-9148

Chevron Contact (Name): MARK MILLER
(Phone): 510-842-9500
Laboratory Name: SUPERIOR
Laboratory Release Number: 7633640
Samples Collected by (Name): BRIAN MCALOON (BPM)
Collection Date: 8-15-95
Signature: R. M.

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	REFRIGERATED (Yes or No)	Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						Remarks
SB1-6.5		1	S		9:19	NONE	Y														HOLD
SB1-11.5		1			9:25																HOLD
SB1-16.5		1			9:30																HOLD
SB1-21.5		1			9:42			X							A	4					
MW4-6.5		1			12:48											4	4				HOLD
MW4-11.5		1			12:52											4					HOLD
MW4-16.5		1			12:58			X													
MW4-21.5		1			13:07			X													
SP-1		1			14:58			X													
SP-2		1	↓		14:59	↓		X													COMPOSITE 2 SPLS INTO 1
SB1-GW		3	W		10:19	HCl	↓	X													BPM 8-17-95

NOTE:
DO NOT BILL
TB-LB SAMPLES

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
T. M.	GTI	8-17-95/12:07	[signature] 611	AERO	8/17/95 12:07
[signature] 611	AERO	8/17/95 0250			
			Received For Laboratory By (Signature)		Date/Time
			[signature] SPL		8-17-95 1:30

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133

Attention: Jim Keller

Client Proj. ID: Chevron 9-4612
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9508H09-04

Sampled: 08/22/95
Received: 08/23/95

Analyzed: 08/25/95
Reported: 08/29/95

QC Batch Number: GC082595BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	9600
Benzene	10	100
Toluene	10	N.D.
Ethyl Benzene	10	N.D.
Xylenes (Total)	10	N.D.
Chromatogram Pattern:		Gas
Unidentified HC		<C8

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	153 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager