ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO-1302

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

February 11, 2002

Tom Bauhs
Chevron USA Inc.
Site Assessment & Remediation
Bldg. L, Rm. 1110
P.O. Box 6004
San Ramon, CA 94583-0904

Dear Mr. Bauhs:

Subject: Chevron Service Station #9-3415, 4500 Park Blvd., Oakland, CA 94602; RO0000512

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY
Please be advised that the following conditions exist at the site:
up to 8,200 ppm Total Petroleum Hydrocarbons as gasoline (TPHg), up to 1,500 ppm TPH as diesel (TPHd), up to 20 ppm TPH as motor oil, up to 0.58 ppm Benzene, up to 9.4 ppm Toluene, up to 6.7 ppm Ethyl benzene, and up to 44 ppm Xylene (BTEX), up to 1,100 ppm Oil & Grease, up to 0.4 ppm Cadmium, up to 14 ppm Chromium, up to 11 ppm Lead, up to 36 ppm Nickel, up to 32 ppm Zinc, up to <0.050 ppm Methyl Tertiary-Butyl Ether (MTBE), up to 0.190 ppm 1,1,1-trichloroethane (1,1,1-TCA), and up to 1.7 ppm tetrachloroethene (PCE) exists in soil beneath the site. (sampled August 16, 1994 to October 26, 2000)

If you have any questions, please contact me at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist

Enclosures: 1. Remedial Action Completion Certificate 2. Case Closure Summary

C: Frank Kliewer, City of Oakland, Planning Dept., 1330 Broadway, 2nd Floor, Oakland, CA 94612
file

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

02-1302

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

REMEDIAL ACTION COMPLETION CERTIFICATION

February 7, 2002

Tom Bauhs
Chevron USA Inc.
Site Assessment & Remediation
Bldg. L, Rm. 1110
P.O. Box 6004
San Ramon, CA 94583-0904

Dear Mr. Bauhs:

Subject: Chevron Service Station #9-3415, 4500 Park Blvd., Oakland, CA 94602; RO0000512

This letter confirms the completion of site investigation and remedial action for the one (1) 1,000 gallon waste oil underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.
Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Section 2721(e) of the California Code of Regulations.

Please contact Don Hwang at (510) 567-6746 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

c: Chuck Headlee, RWQCB
Dave Deaner, SWRCB
Hernan Gomez, OFD
Tony Mikacich, Gettler-Ryan, Inc., 3140 Gold Camp Dr., Suite 170, Rancho Cordova, CA 95670-6021
File

[redacted] [redacted]IA REGI RB# 01-2439

JAN 04 200

QUALITY CONTROL BOA

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION
Agency name: Alameda County-HazMat
City/State/Zip: Alameda, CA 94502
Responsible staff person: Don Hwang
Date: December 21, 2001
Address: 1131 Harbor Bay Pkwy
Phone: (510) 567-6746
Title: Hazardous Materials Specialist

JAN 14 2002

II. CASE INFORMATION

Site facility name: former Chevron Service Station #9-3415
Site facility address: 4500 Park Blvd., Oakland, CA 94602
RB LUSTIS Case No: N/A
Local Case No./LOP Case No.: RO0000512
URF filing date: 11/28/94
SWEEPS No: N/A

Responsible Parties, Addresses, Phone Numbers:
Chevron USA Products Co.
6001 Bollinger Canyon Rd., V1132, San Ramon, CA 94583-0904
925/842-8898, Thomas Bauhs

Donald Lee
1 Cabrillo Place
Oakland, CA 94611-2202

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
	1,000	waste oil	removed	9/19/94

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown, unknown
Site characterization complete? YES
Date approved by oversight agency:
Monitoring Wells installed? no Number: na
Proper screened interval? na
Highest GW depth below ground surface: na Lowest depth: na
Flow direction: presumed west
Most sensitive current use: operating service station
Are drinking water wells affected? no Aquifer name: na
Is surface water affected? no Nearest affected SW name: na

Off-site beneficial use impacts (addresses/locations): none

Report(s) on file? YES Where is report(s) filed? Alameda County, 1131 Harbor Bay Pkwy, Alameda, CA 94502; Oakland Fire Dept, 1605 M. L. King Way, Oakland, CA 94612

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	1 x 500 gal.	Erickson, Inc., Richmond, CA	9/19/94
Soil	275 cu. Yds.	Disposal, Redwood Landfill, Novato, CA	undocumented

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	8200[1]	NA	NA	NA
TPH (Diesel)	1500[2]			
TPH (Motor Oil)	20[3]			
Benzene	0.58[4]			
Toluene	9.4[4]			
Ethylbenzene	6.7[1]			
Xylenes	44[4]			
Oil & Grease	1100[5]			
Cd	0.4[2]			
Cr	14[2]			
Pb	11[5]			
Ni	36[2]			
Zn	32[2]			
MTBE	<0.050[6]			
1,1,1-TCA	0.190[5]			
PCE	1.7[2]			

NA Not Applicable

[1] P-1 8/16/94

[2] WO-2-8.5' 9/19/94

[3] MW 2-25 5/3/95

[4] P-2 8/16/94

[5] WO-1-8.5' 9/19/94

[6] G1-5,G1-13, G2-15,G3-12.5 10/26/00

Comments (Depth of Remediation, etc.):

See Section VII, Additional Comments, etc...

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? YES
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? YES
Does corrective action protect public health for current land use? YES
Site management requirements: A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination. The site should be listed in the City of Oakland Permit Tracking System.
Should corrective action be reviewed if land use changes? YES
Monitoring wells Decommissioned: na
Number Decommissioned: na Number Retained: na
List enforcement actions taken: none
List enforcement actions rescinded: none

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Don Hwang Title: Haz Mat Specialist

Signature: Don Hwang Date: 1/2/02

Reviewed by

Name: Eva Chu Title: Haz Mat Specialist

Signature: Eva Chu Date: 01/02/02

Name: Barney Chan Title: Haz Mat Specialist

Signature: Barney Chan Date: 1/2/02

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response: concur

RWQCB Staff Name: Chuck Headlee Title: AEG

Signature: Chuck Headlee Date: 1/8/02

VII. ADDITIONAL COMMENTS, DATA, ETC.

In August and September 1994, the product lines from three underground gasoline storage tanks and a 500 gallon single wall waste oil underground storage tank were removed. On August 16, 1994, six soil samples, P-1, P-2, P-3, P-4, P-5, and P-6, were collected at 3.5 feet below surface grade (bsg) beneath the product lines. The samples were analyzed for Total Petroleum Hydrocarbon- Gasoline (TPH-G), and Benzene, Toluene, Ethylbenzene, Xylene (BTEX). For P-1, the concentrations found were 8,200, 0.26, 3.6, 6.7, and 6.5 parts per million ppm, respectively. For P-2, the concentrations found were 420, 0.58, 9.4, 6.5, and 44 ppm, respectively. For P-3, P-4, P-5, and P-6, the concentrations were NonDetectable (ND) for all constituents. On September 19, 1994, two soil samples, WO-1-8.5' and WO-2-8.5', were collected beneath the waste oil tank at 8.5 feet bsg. The samples were analyzed for Total Petroleum Hydrocarbon- Diesel (TPH-D), TPH-G, Total Oil & Grease (TOG), BTEX, Cadmium, Chromium, Lead, Nickel, Zinc, Halogenated Volatile Organics, and Semi- Volatile Organics. The concentrations found in WO-1-8.5' were 1,200 ppm, 440, 1100, ND, 3.1, 2.3, 21, 0.3, 11, 11, 33, 29, ND, and ND, respectively. The concentrations found in WO-2-8.5' were 1,500 ppm, 170, 1000, ND, 0.5, ND, 4.2, 0.4, 14, 8, 36, 32, ND, and ND, respectively.

On May 3, 1995, four soil borings, MW-1, MW-2, MW-3, and MW-4, were drilled. Soil boring MW-3 was abandoned at 2 feet bsg when backfill from the tank pit was encountered. MW-1, MW-2, and MW-4, were terminated when drilling refusal was encountered due to bedrock. The depths reached for MW-1, MW-2, and MW-4, were 25 feet bsg, 25 feet bsg, and 30 feet bsg, respectively. The soil borings were not converted into groundwater monitoring wells because groundwater was not encountered. Soil samples were collected at 5 foot intervals. The soil boring samples collected at 10 and 20 feet bsg in MW-1, 10 and 25 feet bsg in MW-2, and 10 and 25 feet bsg in MW-4, were analyzed for TPH-G and BTEX. The soil boring samples collected from MW-2 were also analyzed for TPH-D, TPH -Motor Oil (TPH-MO), and halogenated volatile organic (HVO). TPH-G, BTEX, and HVO were ND for all samples. TPH-D was 1.8 ppm and 2.3 ppm for MW-2 at 10 feet and at 25 feet, respectively. TPH-MO was ND and 20 ppm, respectively, for the same two samples.

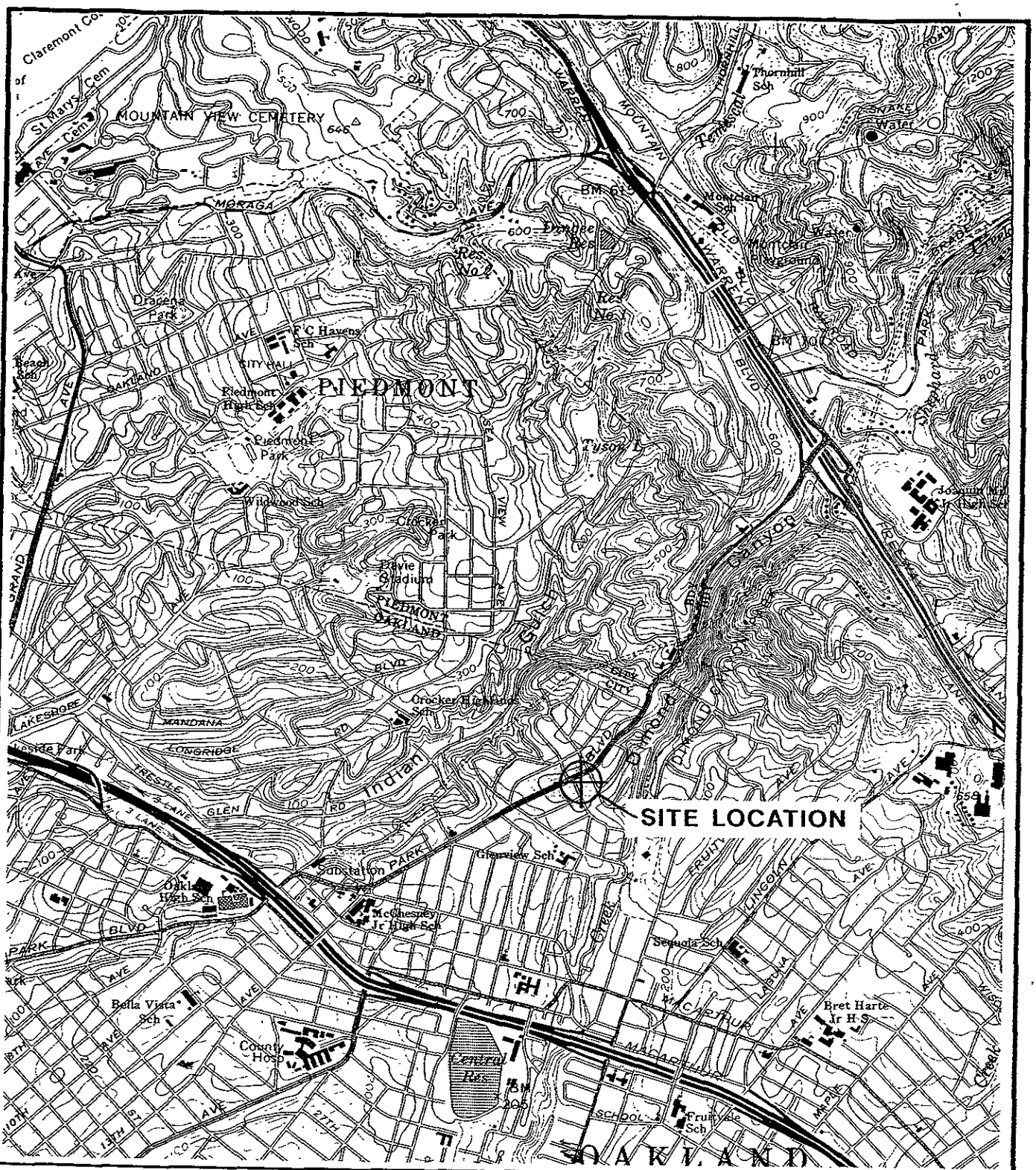
On October 26, 2000 three borings, G-1, G-2, and G-3, were drilled. The borings were advanced to bedrock at a depth of 13.5 ft. to 15.5 ft. bsg. Groundwater was not encountered. Soil samples were only analyzed for Methyl Tertiary-Butyl Ether (MTBE). None of the samples contained detectable concentrations of MTBE.

Residual petroleum hydrocarbon remains in soil beneath the north dispensers at 3.5 ft. bsg. Residual chlorinated hydrocarbons [1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethene (PCE)] also exists in soil beneath the former waste oil tank at 8.5 ft. bsg. The vertical extent of the contamination has not been delineated. A comparison of the maximum concentrations of contaminants detected to the Oakland Tier 1 Risk Based Screening Levels (RBSLs), found that benzene exceeded the Tier 1 RBSL. The Tier 1 RBSL was for carcinogenic risk for inhalation of indoor air vapors from subsurface soil for residential land use. The maximum soil sample concentration for benzene was 0.58 mg/kg, exceeding its Tier 1 RBSL of 0.069 mg/kg. However,

for the same medium and exposure pathway for commercial/industrial land use, the Tier 1 RBSL of 1.1 mg/kg was not exceeded. The maximum soil sample concentrations for toluene, ethylbenzene, xylene, 1,1,1-TCA, and PCE, did not exceed their Tier 1 RBSLs for inhalation of indoor air vapors from subsurface soil for residential land use. Because the site is currently occupied by an active service station, further delineation of the contamination can be performed in the future when the current tank system is removed or another fuel release is identified. Also, contamination is not likely to migrate much vertically beyond the sandstone bedrock at 15 – 25 ft. bsg. Additional subsurface investigations are not warranted at this time.

In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment.



GROUNDWATER TECHNOLOGY

SOURCE: U.S.G.S. 7.5' QUAD SHEET
OAKLAND EAST, CALIFORNIA
PHOTOREVISED 1980

N

SCALE: 0 FEET 2000

SITE LOCATION MAP

CLIENT: CHEVRON U.S.A. PRODUCTS CO.
SERVICE STATION No. 9-3415

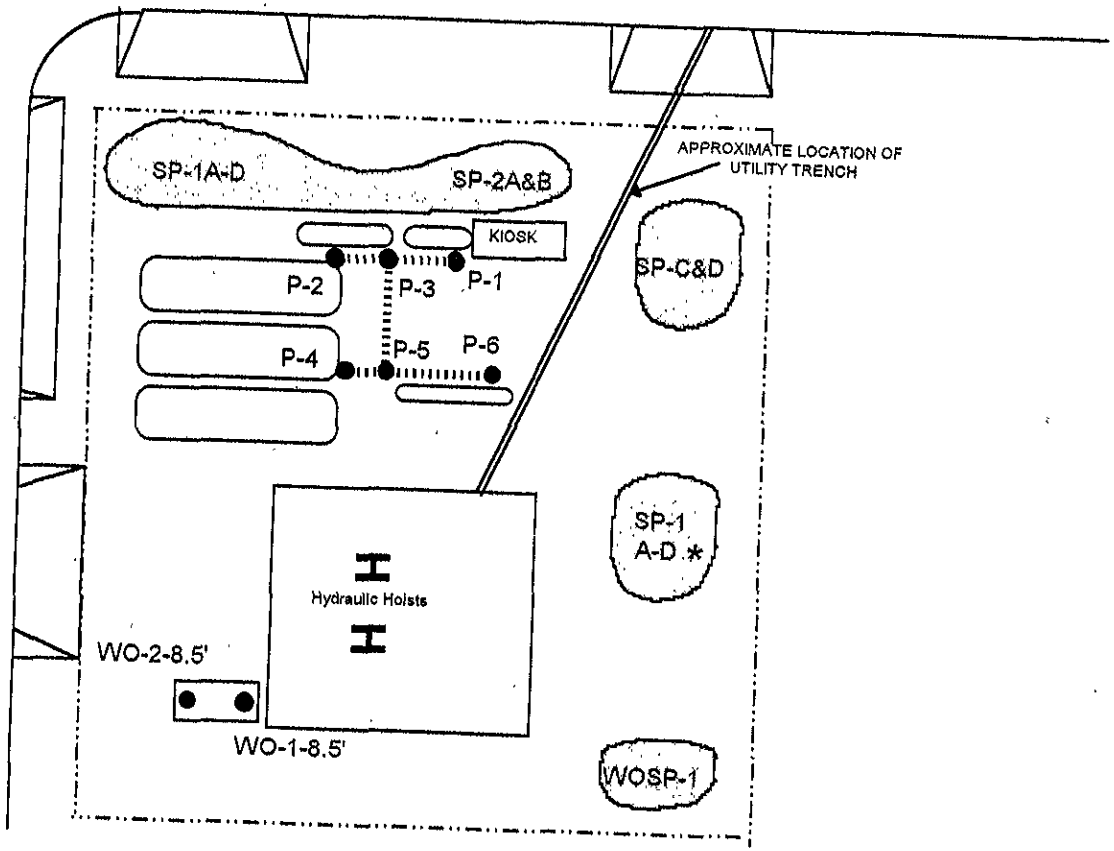
DATE: 12/6/94

LOCATION: 4500 PARK BOULEVARD
OAKLAND, CALIFORNIA

FIGURE: 1

PARK BOULEVARD

EVERETT STREET



EXPLANATION

- UST — Underground storage tank
- Product Lines
- P-1 — Sample ID and location
- H — Hydraulic Hoist
- SP-C&D — Soil Stockpile
- * — Soil generated from the utility trenches

N

0 10 20 30

Scale in feet

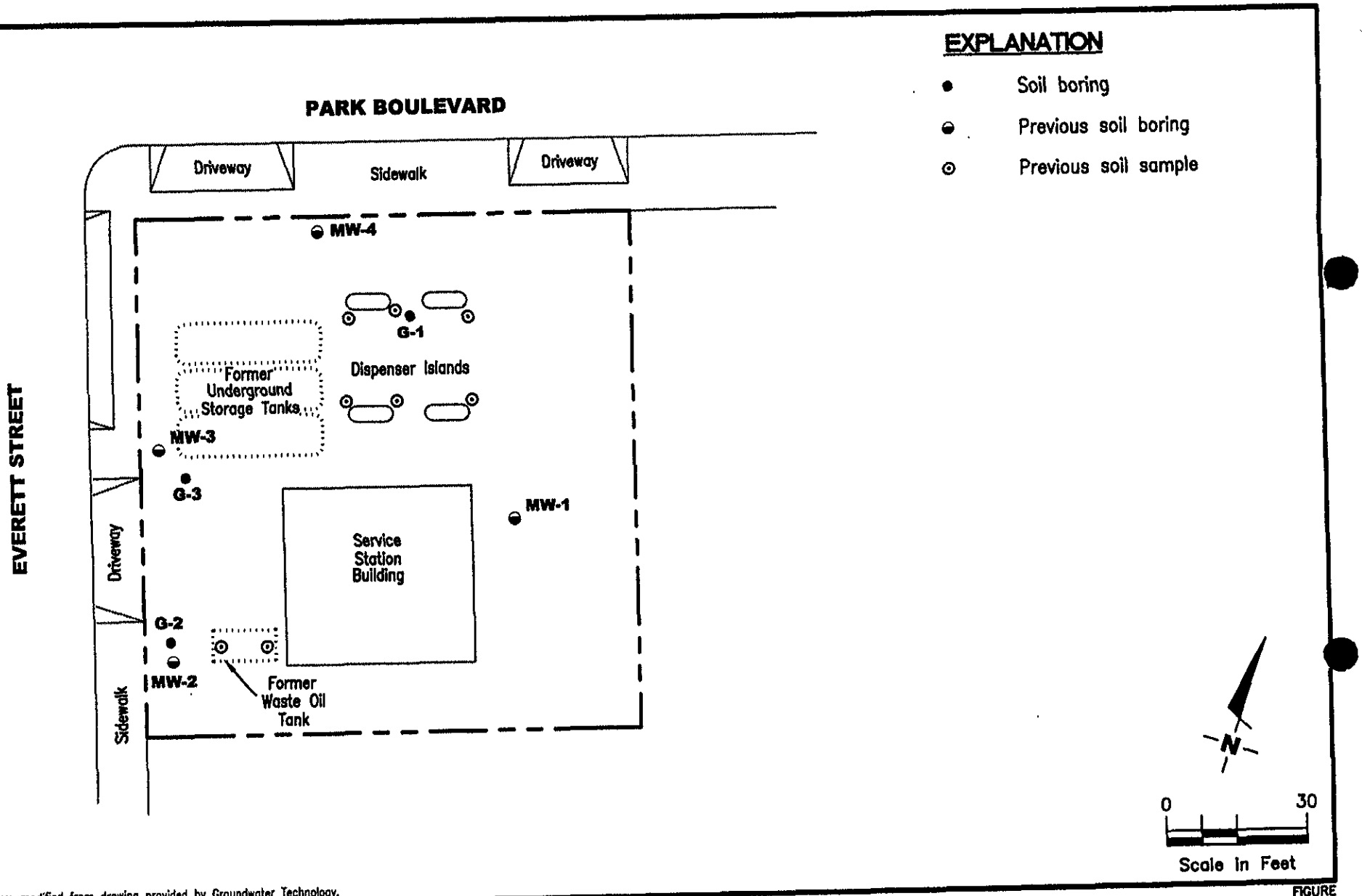
Touchstone Developments
Environmental Management

PRODUCT PIPING, WASTE-OIL TANK, AND STOCKPILE SAMPLING LOCATIONS

CHEVRON SERVICE STATION #9-3415
4500 Park Boulevard
Oakland, California

FIGURE
2

PROJECT NO.	DATE	DRAWN BY:	BASE MAP:
3415	9/94	WTJ	GEOSTRATEGIES 7/94



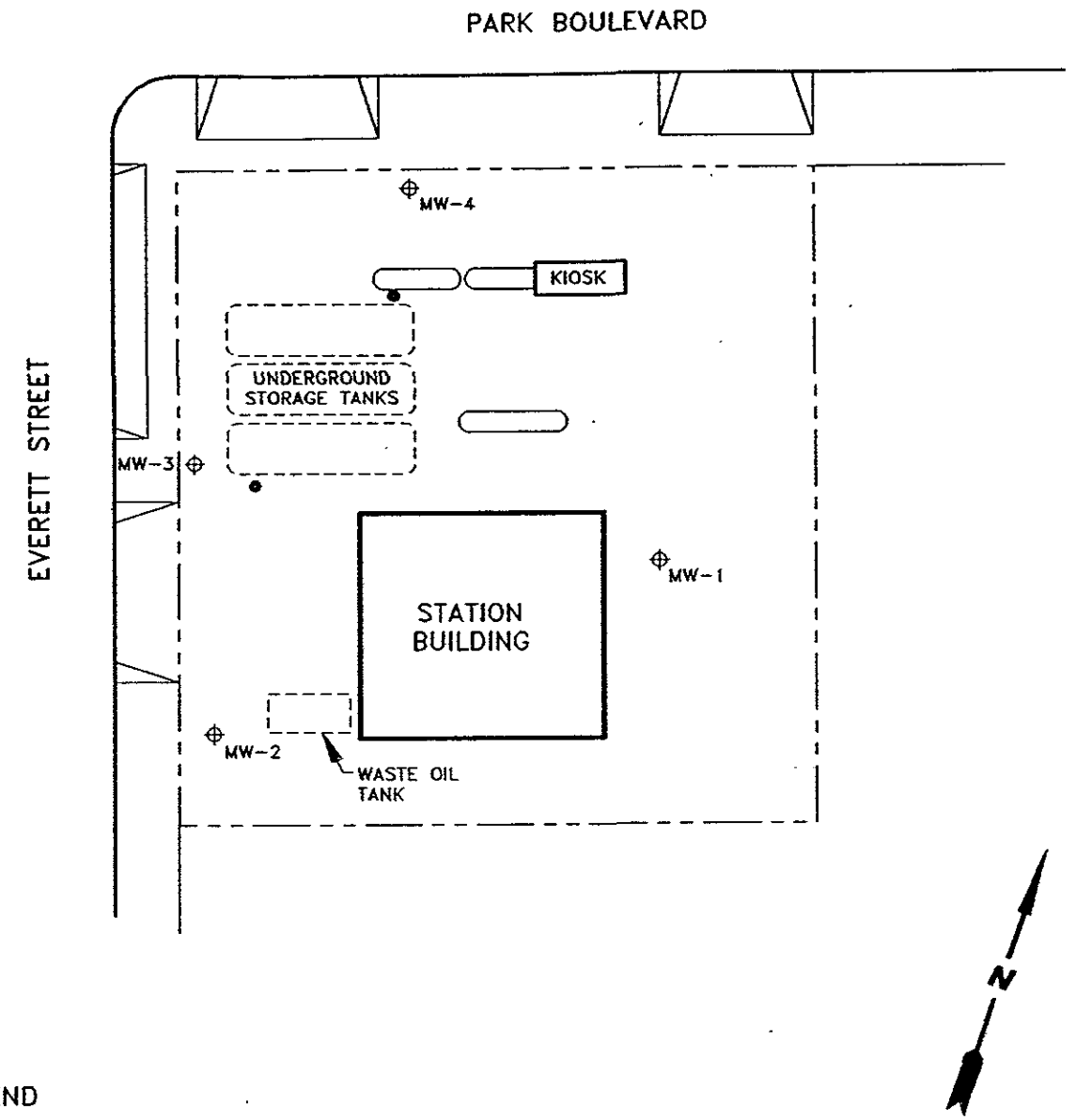
Source: Figure modified from drawing provided by Groundwater Technology.

FIGURE 2

GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

SITE PLAN
Chevron Service Station No. 9-3415
4500 Park Boulevard
Oakland, California

PROJECT NUMBER 346519
REVIEWED BY
DATE 1/01
REVISED DATE



LEGEND

- ⊕ SOIL BORING
- ● TANK PIT MONITORING WELL

GROUNDWATER TECHNOLOGY	0 FEET 30 SCALE	SITE PLAN			
CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-3415	FILE: SP595	PROJECT NO: 020200048	PM	RG/PE	
LOCATION: 4500 PARK BLVD. OAKLAND, CALIFORNIA	REV: 1			FIGURE: 2	
	DES: TW	DET: ML	DATE: 5/25/95		

TABLE 1
Analytical Results of Soil Samples

(Results expressed as milligrams per kilogram)

Chevron Service Station No. 9-3415
4500 Park Boulevard
Oakland, California

Date	Sample ID	Sample Depth (ft)[a]	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	TPH-d	TPH-mo	HVO
5-3-95	MW 1-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1	-	-	-
	MW 1-20	20	<0.0050	<0.0050	<0.0050	<0.0050	<1	-	-	-
	MW 2-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1	1.8	<1	ND
	MW 2-25	25	<0.0050	<0.0050	<0.0050	<0.0050	<1	2.3	20	ND
	MW 4-10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1	-	-	-
	MW 4-25	25	<0.0050	<0.0050	<0.0050	<0.0050	<1	-	-	-

TPH-g = total petroleum hydrocarbons-as-gasoline
TPH-d = total petroleum hydrocarbons-as-diesel
TPH-mo = total petroleum hydrocarbons-as-motor oil
HVO = halogenated volatile organics (EPA 8010)
ND = Not detectable at detection limits. Detection limits are noted in laboratory analytical reports.

[a]Feet below surface grade

Table 1. Soil Analytical Results - Chevron Service Station #9-3415 4500 Park Boulevard Oakland California,

Sample ID	Depth (feet)	Date	MTBE (ppm)
Soil Boring G-1			
G1-5	5	10/26/00	< 0.050
G1-13	13	10/26/00	< 0.050
Soil Boring G-2			
G2-15	15	10/26/00	< 0.050
Soil Boring G-3			
G3-12.5	12.5	10/26/00	< 0.050

EXPLANATION
MTBE= Methyl Tertiary-Butyl Ether
ppm= Parts Per million

METHOD
MTBE by EPA method 8020

LAB
Sequoia Analytical (ELAP # 1271)

346521.02
DG29-339

TABLE A
PRODUCT PIPING, WASTE-OIL EXCAVATION AND STOCKPILE ANALYTICAL SUMMARY
Results in mg/Kg - parts per million, (ppm)

PRODUCT LINE SAMPLING RESULTS

SAMPLE ID	DEPTH (ft.)	LAB	DATE	TPH - Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
P-1	3.5	Sequoia	16-Aug-94	8200	0.26	3.6	6.7	6.5
P-2	3.5	Sequoia	16-Aug-94	420	0.58	9.4	6.5	44
P-3	3.5	Sequoia	16-Aug-94	ND	ND	ND	ND	ND
P-4	3.5	Sequoia	16-Aug-94	ND	ND	ND	ND	ND
P-5	3.5	Sequoia	16-Aug-94	ND	ND	ND	ND	ND
P-6	3.5	Sequoia	16-Aug-94	ND	ND	ND	ND	ND

WASTE-OIL TANK EXCAVATION SAMPLING RESULTS

SAMPLE ID	DEPTH (ft.)	LAB	DATE	TPH - Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-Diesel	TOG
WO-1-8.5'	8.5	Superior	19-Sep-94	440	ND	3.1	2.3	21	1200	1100
WO-2-8.5'	8.5	Superior	19-Sep-94	170	ND	0.5	ND	4.2	1500	1000

SAMPLE ID	DEPTH (ft.)	LAB	DATE	Cadmium	Chromium	Lead	Nickel	Zinc	8010	8270
WO-1-8.5' *	8.5	Superior	19-Sep-94	0.3	11	11	33	29	ND	ND
WO-2-8.5' **	8.5	Superior	19-Sep-94	0.4	14	8	36	32	ND	ND

WRONG

* .190 ppm 1,1,1-TCA and .220 ppm PCE

** .12 ppm 1,1,1-TCA and 1.7 ppm PCE

Drilling Log

GROUNDWATER TECHNOLOGY

Soil Boring **MW-1**

Project *Chv/9-2315* Owner *Chevron USA*
Location *4500 Park Blvd., Oakland CA* Proj. No. *020200048*
Surface Elev. *NA ft.* Total Hole Depth *25 ft.* Diameter *8 in.*
Top of Casing *NA ft.* Water Level Initial *NA ft.* Static *NA ft.*
Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA in.*
Casing: Dia *NA in.* Length *NA ft.* Type *NA*
Fill Material *Neat cement* Rig/Core *CME-55/Split Spoon*
Drill Co. *Soil Exploration Services* Method *Hollow Stem Auger*
Driller *Tyke Van Zandt* Log By *Terry James* Date *5/3/95* Permit # *95154*
Checked By *Ed Simonis* License No. *RG 4422*

See Site Map For Boring Location

COMMENTS:

PID readings at 15 ft. were taken from drill cuttings. Very poor to no recovery at sampling intervals.

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					Conc	Concrete.
2					ML	Clayey SILT (40,60): red-brown, slightly plastic, very stiff, dry, lenses up to 1/4 in thick of plastic Clay, no hydrocarbon odor.
6	0	MW-1-5	50/4in.			Fine grained SANDSTONE: tan, poorly indurated, weathered, no hydrocarbon odor.
10	0	MW-1-10	85/2in.			
12					SS	
16	0	MW-1-15	85/0in.			(Grades moderately indurated, little weathering, no hydrocarbon odor.)
20	0	MW-1-20	50/3in.			(Grades hard, well indurated, fresh, no hydrocarbon odor.)
24					QZT	METAQUARTZITE: hard, thin bedded, intensely fractured, weathered along fractures, dry, no hydrocarbon odor.
26	0	MW-1-25	85/0in.			End of boring.

Drilling Log

GROUNDWATER TECHNOLOGY

Soil Boring **MW-2**

Project *Chv/9-2315* Owner *Chevron USA*
Location *4500 Park Blvd., Oakland CA* Proj. No. *020200048*
Surface Elev. *NA ft.* Total Hole Depth *27 ft.* Diameter *8 in.*
Top of Casing *NA ft.* Water Level Initial *NA ft.* Static *NA ft.*
Screen: Dia *NA in.* Length *NA ft.* Type/Size *NA in.*
Casing: Dia *NA in.* Length *NA ft.* Type *NA*
Fill Material *Neat cement* Rig/Core *CME-55/Split Spoon*
Drill Co. *Soil Exploration Services* Method *Hollow Stem Auger*
Driller *Tyke Van Zandt* Log By *Terry James* Date *5/3/95* Permit # *95154*
Checked By *Ed Simonis* License No. *RG 4422*

See Site Map For Boring Location

COMMENTS:

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%
-2						
0					Conc	Concrete.
2					CL	Silty CLAY (30,70):gray-green, very plastic, dense, slightly moist, no hydrocarbon odor.
4						
6	0	MW-2-5	50/6in.			Fine grained SANDSTONE: tan, poorly indurated, weathered, no hydrocarbon odor.
8						
10	0	MW-2-10	28 50/5in.			(Grades 20% blue-green mottling, no hydrocarbon odor.)
12						
14						
16	0	MW-2-15	60/5in.		SS	(Grades moderately indurated, little weathering, no) hydrocarbon odor.)
18						
20	0	MW-2-20	50/6in.			
22						(Grades well indurated, no hydrocarbon odor.)
24						
26	0	MW-2-25	60/5in.			(Grades red mottling, hard, no hydrocarbon odor.)
28						End of boring.
30						
32						
34						
36						
38						
40						
42						

Drilling Log

GROUNDWATER TECHNOLOGY

Soil Boring MW-4

Project Chv/9-2315 Owner Chevron USA
Location 4500 Park Blvd., Oakland CA Proj. No. 020200048
Surface Elev. NA ft. Total Hole Depth 25 ft. Diameter 8 in.
Top of Casing NA ft. Water Level Initial NA ft. Static NA ft.
Screen: Dia NA in. Length NA ft. Type/Size NA in.
Casing: Dia NA in. Length NA ft. Type NA
Fill Material Neat cement Rig/Core CME-55/Split Spoon
Drill Co. Soil Exploration Services Method Hollow Stem Auger
Driller Tyke Van Zandt Log By Terry James Date 5/3/95 Permit # 95154
Checked By Ed Simonis License No. RG 4422

See Site Map For Boring Location

COMMENTS:

Very poor recovery, used 1 in. sampler for the 15ft, and 20 ft. samples, used a 2 oz. jar for the 25 ft. sample.

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					Conc	Concrete.
2					CL	Silty CLAY (40,60):gray-green, very plastic, dense, slightly moist, no hydrocarbon odor.
4						
6	0	MW-4-5	28 50/4in.			Fine grained SANDSTONE: tan, poorly indurated, weathered, no hydrocarbon odor.
8						
10	0	MW-4-10	55/5in.			(Grades 20% black and white mottling)
12						
14						
16	0	MW-4-15	60/5in.		SS	(Grades moderately indurated, little weathering, no hydrocarbon odor.)
18						
20	0	MW-4-20	60/5in.			
22						(Grades well indurated, no hydrocarbon odor.)
24						
26	0	MW-4-25	60/5in.			(Grades hard non hydrocarbon odor.)
28						End of boring.
30						
32						
34						
36						
38						
40						
42						

Gettler-Ryan, Inc.

Log of Boring G-1

PROJECT: *Chevron Service Station No. 9-3415*	LOCATION: *4500 Park Boulevard, Oakland, CA*
GR PROJECT NO.: *346519.01*	SURFACE ELEVATION:
DATE STARTED: *10/26/00*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *10/26/00*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe*	TOTAL DEPTH: *13.5 feet*
DRILLING COMPANY: *Vironex*	GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Concrete and gravel.	Hand augered to 5 feet to clear utilities.
					SM	SILTY SAND (SM) – yellow (10YR 7/6), moist, loose; 70% fine sand, 30% silt.	Boring backfilled with neat cement from the bottom to ground surface.
3							
	4	G1-5					
6							
						SANDSTONE – brownish yellow (10YR 6/6), moist; poorly indurated, weathered.	
9	4	G1-9.5					
12							
	5	G1-13				Refusal at 13.5 feet.	
15							
18							
21							

Gettler-Ryan, Inc.

Log of Boring G-2

PROJECT: *Chevron Service Station No. 9-3415*	LOCATION: *4500 Park Boulevard, Oakland, CA*
GR PROJECT NO.: *346519.01*	SURFACE ELEVATION:
DATE STARTED: *10/26/00*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *10/26/00*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe*	TOTAL DEPTH: *15.5 feet*
DRILLING COMPANY: *Vironex*	GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Concrete and gravel.	Hand augered to 5 feet to clear utilities.
					CL	CLAY (CL) – reddish brown (5YR 5/3), moist, medium plastic; 100% clay.	Boring backfilled with neat cement *from the bottom to* ground surface.
3						At 3 feet color changes to pale brown (10YR 6/3); becomes 85% clay, 15% silt.	
6	0	G2-5				SANDSTONE – brownish yellow (10YR 6/6), moist; poorly indurated, weathered.	
						At 7 feet 2 inch layer of clay.	
9							
	0	G2-10					
12							
15	4	G2-15				Refusal at 15.5 feet.	
18							
21							

JOB NUMBER: *346519.01*

Gettler-Ryan, Inc.

Log of Boring G-3

PROJECT: *Chevron Service Station No. 9-3415*	LOCATION: *4500 Park Boulevard, Oakland, CA*
GR PROJECT NO. : *346519.01*	SURFACE ELEVATION:
DATE STARTED: *10/26/00*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *10/26/00*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe*	TOTAL DEPTH: *13.5 feet*
DRILLING COMPANY: *Vironex*	GEOLOGIST: *Andrew Smith*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Concrete and gravel.	Hand augered to 5 feet to clear utilities.
					SM	SILTY SAND (SM) - dark brown (7.5YR 3/2), moist, loose; 80% fine sand, 20% silt.	Boring backfilled with neat cement from the bottom to ground surface.
3							
	0	G3-5.5					
6						SANDSTONE - brownish yellow (10YR 6/6), moist; poorly indurated, weathered.	
9	0	G3-9.5					
12	0	G3-12.5				Refusal at 13.5 feet.	
15							
18							
21							

JOB NUMBER: *346519.01*