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GETTLER-RYAN INC.

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Alameda County

TRANSMITTAL

JUL 17 2003

Environmental Health

TO: Mr. David DeWitt
ConocoPhillips
76 Broadway
Sacramento, CA 95818

DATE: 7/14/03
PROJECT NO. 140088.2
SUBJECT: Service Station No. 5781, Oakland

From: Jeremy Smith

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1	7/14/03	Site Closure Request

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Signed: _____ for

COPIES TO: Don Hwang – Alameda County Health Care Services
1131 Harbor Bay Parkway, Alameda, CA 94502

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GETTLER-RYAN INC.

Alameda County

JUL 1 7 2003

Environmental Health

REQUEST FOR CLOSURE

at

ConocoPhillips (76) Service Station No. 5781
3535 Pierson Street
Oakland, California

Report No. 140088.2

Prepared for:

Mr. David B. De Witt
ConocoPhillips
76 Broadway
Sacramento, California 95818

Prepared by:

Gettler-Ryan Inc.
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No. 6882
STATE OF CALIFORNIA

July 14, 2003

TABLE OF CONTENTS

FIGURES

APPENDICES

REQUEST FOR CLOSURE
At
ConocoPhillips (76) Service Station No. 5781
3535 Pierson Street
Oakland, California

Report No. 140088.2

INTRODUCTION

At the request of ConocoPhillips, Gettler-Ryan Inc. (GR) has prepared this report requesting regulatory closure for the subject site. This closure report presents a chronology of the environmental investigations performed at the site to date, followed by a rationale for why closure should be granted.

SITE DESCRIPTION

The subject site is currently an operating ConocoPhillips (76) service station located on the northwest corner of the intersection of Pierson Street and the highway 580 off ramp in Oakland California (Figure 1). Station facilities include two 12,000-gallon double-wall fiberglass clad steel gasoline Underground Storage Tanks (USTs), one 520-gallon fiberglass clad steel waste oil UST, two dispenser islands and associated double-walled fiberglass piping, a station building, and one groundwater monitoring well (MW-A). Locations of pertinent site features are shown of Figure 2.

PREVIOUS ENVIRONMENTAL WORK

The following presents a chronological history of previous environmental investigations conducted at the subject site:

1989: In December, Kaprealian Engineering Incorporated (KEI) removed two 10,000 gallon steel fuel USTs and one 280-gallon steel waste oil UST and the associated product piping. No holes or cracks were observed in the gasoline USTs, however the waste oil UST contained one hole of approximately 1.25 square inches in size. A total of 7 soil samples were collected from the fuel UST cavity and the associated product piping trenches and one soil sample was collected from beneath the waste oil UST. All soil samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX). In addition, the soil sample collected from the waste oil tank pit was

analyzed for, Total Petroleum Hydrocarbons as Diesel (TPHd), Total Oil and Grease (TOG), halogenated volatile organic compounds (HVOCs) by EPA Method 8010, and the metals: cadmium, chromium, zinc, and lead. (KEI, 1991).

The soil samples collected from the fuel UST cavity were reported as containing up to 46 parts per million (ppm) of TPHg and up to 0.65 ppm of benzene. Soil samples collected from beneath the product piping were reported as non detect (ND) for all constituents analyzed.

The initial soil sample collected from the base of the waste oil UST cavity (6 feet below ground surface (bgs), labeled WO1) was reported as containing concentrations of TPHg at 670 ppm, TPHd at 8,300 ppm, and TOG at 48,000 ppm. Based on the analytical results of WO1, the waste oil UST pit was overexcavated to 16 feet bgs and soil sample WO1(16) was collected at the base of the UST pit. The waste oil pit was also excavated approximately 35 feet to the east, 10 feet to the west, 15 feet to the south, and 2 feet to the north. The station building and buried utilities prevented further excavation except to the east. Four sidewall samples were collected at depths ranging from 9 to 10 feet bgs following the over-excavation of the waste oil UST cavity (KEI, 1991).

Soil sample WO1(16) was reported to contain concentrations of TOG (910 ppm), TPHd (74 ppm), TPHg (15 ppm), and benzene (0.060 ppm). All HVOCs were reported as ND. Soil sample SWB, from the east side wall, was reported as ND for all constituents except TPHg (2.0 ppm). The soil samples from remaining side walls, in which further excavation was not possible, were reported to contain TOG concentrations up to 17,000 ppm, TPHd concentrations up to 1,400 ppm, TPHg concentrations up to 220 ppm, benzene concentrations up to 2.3 ppm, tetrachloroethene concentrations up to 160 parts per billion (ppb), and a 1,1,1-trichloroethane concentration up to 5.8 ppb (KEI, 1991).

1990: In April, three exploratory soil borings (MW-1 through MW-3) were advanced to depths ranging from approximately 40 to 50 feet bgs, and soil samples were collected at 5 foot intervals. MW-1 through MW-3 were intended to be converted to monitoring wells, but groundwater was not encountered in the boreholes, and subsequently they were filled with neat cement. The soil samples collected were reported as ND for concentrations of TPHg, THPd, BTEX, TOG, and HVOCs (KEI, 1991).

In July, two soil borings were drilled adjacent to the former waste oil tank cavity to depths of approximately 34.5 and 38 feet bgs, and soil samples were collected at 5 foot intervals in order to determine if waste oil impacted soil was limited to the immediate area surrounding the former waste oil UST. Groundwater was

encountered at depths from approximately 33.5 to 36.7 feet bgs and a groundwater sample was collected from each boring. The soil samples collected were reported as ND for concentrations of TPHd. TPHg was detected at a concentration of 1.2 ppm in soil sample EB2 (9.5), benzene was detected at a concentration of 0.0090 ppm in soil sample EB2 (12.5), and 1,1,1-trichloroethane was detected at a concentration of 6.2 ppb in soil sample EB1 (28.5). All other samples were reported as ND for the analyzed constituents. The two grab groundwater samples were reported as having a maximum TPHd concentration of 6.7 parts per billion (ppb) and a maximum benzene concentration of 0.61 ppb. The groundwater samples were reported as ND for TPHg, TOG, and VOCs (KEI, January 1991).

In December, KEI installed one monitoring well (MW-A) to a depth of 45 feet bgs. One soil sample at 32.5 feet bgs was submitted for laboratory analysis. Soil sample MWA (32.5) was reported as ND for TPHd, TPHg, BTEX, and VOCs. TOG was detected at a concentration of 36 ppm (KEI, 1991).

2003: Groundwater samples have been collected on a quarterly or annual basis since the installation of well MW-A. TPHg, benzene, and methyl tertiary butyl ether (MtBE) have not been detected during the monitoring and sampling events. TPHd has been sporadically detected, however laboratory reports indicate that the hydrocarbon does not resemble the pattern of the requested fuel. TOG has been detected on two occasions at concentrations of 7 ppm and 5,900 ppb (GR, 2003).

Geology and Hydrology

Based on review of regional geologic maps, the site is underlain by undivided Quaternary deposits and is closely adjacent to a mapped geologic contact with the upper member of the Quaternary San Antonio Formation. In addition, the site is situated approximately 1,200 to 2,800 feet southwest of mapped splays of the active Hayward Fault Zone (KEI, 1991).

The results of previous subsurface studies indicate that the site is underlain by interbedded layers of clayey gravel, well-to-poorly-graded gravel, clayey sand, and silt beds to depths ranging from approximately 5 to 22.5 feet bgs, except in well MW-A. This interbedded regime is in turn underlain by very stiff clay and silty clay to the maximum depth explored (50 feet bgs), except in EB2. In EB2, a clayey silt bed was encountered between depths of 29.5 to approximately 34.5 feet and is in turn underlain by a clayey sand bed to the maximum depth explored (38 feet bgs). In boring MWA, silty clay was encountered to approximately 41 feet bgs. This thick interval of fine-grained material is underlain by a 2-foot thick well-graded saturated sand layer, and which is in turn underlain by clayey silt to the maximum depth explored of 45 feet bgs (KEI, 1991).

During the last reported groundwater monitoring and sampling event on February 22, 2003, groundwater was encountered at a depth of 14.41 feet from the top of the well casing (TOC). Historically, depth to groundwater has ranged from 11.24 feet to 19.88 feet below TOC (GR, 2003).

SITE CLOSURE SUMMARY

GR prepared a site closure summary (SCS) for the site. The SCS contains current and historical information about the site. The SCS with its figures, tables and historical documentation is included in Appendix A.

RATIONALE FOR NO FURTHER ACTION

The previous environmental work conducted at the site has consisted of compliance soil sampling associated with fuel and waste oil USTs removals. Results of the compliance soil samples collected at the site indicate that the residual hydrocarbon impact to soil is limited to a small area around the former/current waste oil UST where overecavation was not feasible due to the presence of the existing building and underground utilities. Approximately 50 yds^3 of impacted soil were overexcavated from the waste oil UST cavity, which extended to approximately 16 feet bgs. Confirmatory soil samples concentrations ranged up to 220 ppm (TPHg), up to 1,400 ppm (TPHd), up to 17,000 ppm (TOG), and up to 2.3 ppm (benzene). Additional subsurface investigation has confirmed that hydrocarbon impacted soil is limited to the small area around the former waste oil UST.

Groundwater samples collected to date indicated that, groundwater beneath the site is not seriously impacted by petroleum hydrocarbons. Groundwater collected from borings EB-1 and EB-2 near the waste oil excavation limits were reported as ND for TPHg and TOG, up to 6.7 ppb for TPHd, and up to 0.61 ppb for benzene. Groundwater from well MWA has been sampled quarterly or annually since 1990. TPHg, benzene, and MtBE have not been detected during the monitoring and sampling events. TPHd has been sporadically detected, however laboratory reports indicate that they hydrocarbon detected does not resemble the pattern of the requested fuel. TOG has been detected on two occasions at a concentration of 7 ppm and 5,900 ppb.

According to unpublished data obtained from ConocoPhillips, there are no water producing wells within one mile of the site. However, the Geotracker website reports the presence of four active water wells estimated to be nearby this site. The four active wells are reported to be located in East bay Regional Park District land, located approximately 2,193 feet northeast of the site. The Geotracker data is included with the SCS.

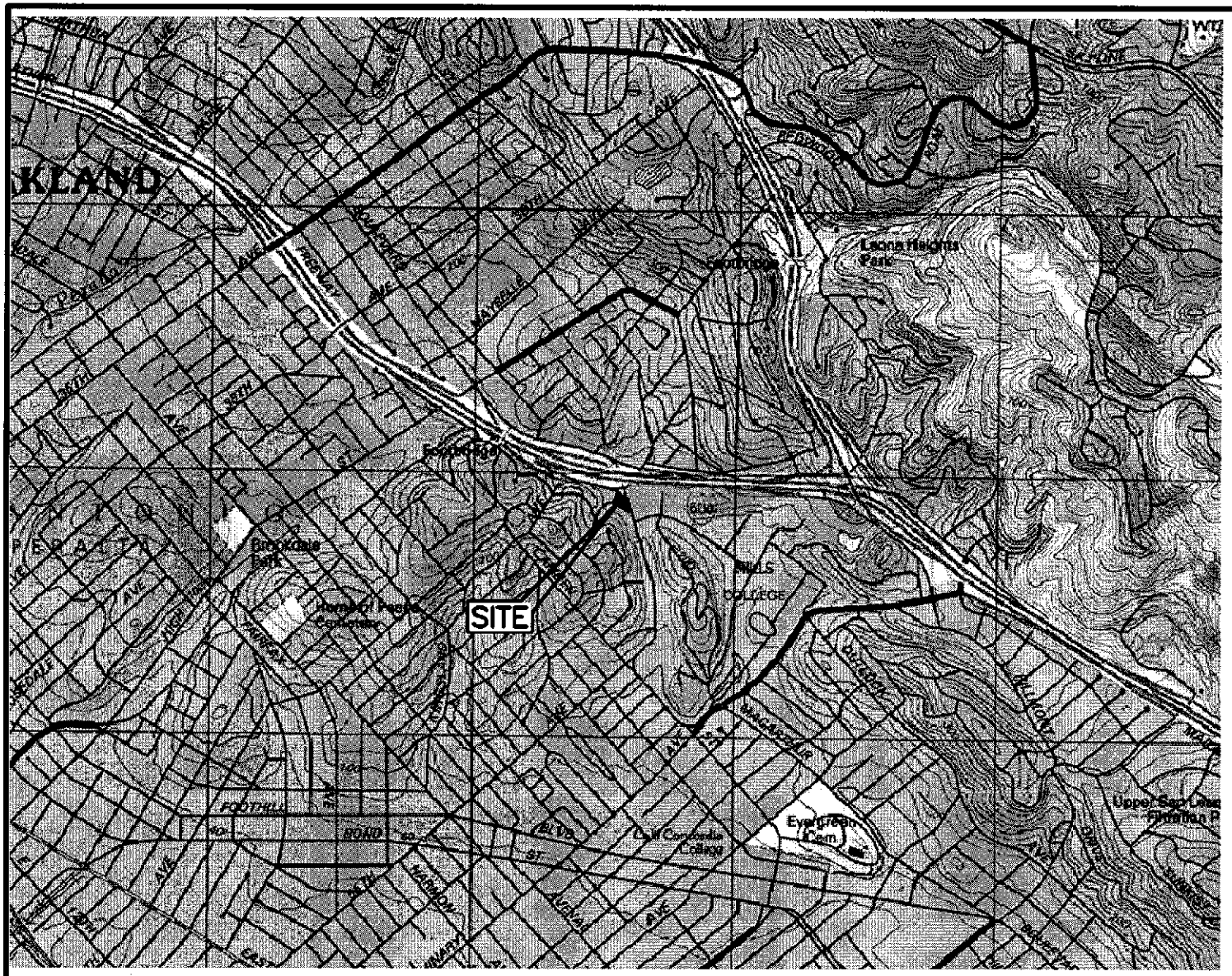
Due to the distance from any sensitive receptors and the minimal dissolved hydrocarbon impact beneath the site, this impact is unlikely to have a detrimental effect on human health or the environment. In addition, it is GR's understanding that as of January 1, 2001, ConocoPhillips no longer delivers fuel containing MtBE to service stations in northern California, further reducing the potential public health risk in the vicinity of the subject site. The residual hydrocarbon impact to soils in the vicinity of the waste oil UST is anticipated to naturally degrade and do not present a risk to human health or the environment.

Based on the information and data presented in this report, additional investigation or remediation of soil and/or groundwater is not warranted. GR and ConocoPhillips are of the opinion that the site should be considered for regulatory closure.

REFERENCES

Gettler-Ryan Inc., Groundwater Monitoring and Sampling Report, Annual-Event of February 22, 2003, dated April 2, 2003.

Kaprealian Engineering, Inc., Preliminary Ground Water Investigation at Unocal Service Station #5781, 3535 Pierson Street, Oakland, California, dated January 21, 1991.



Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.

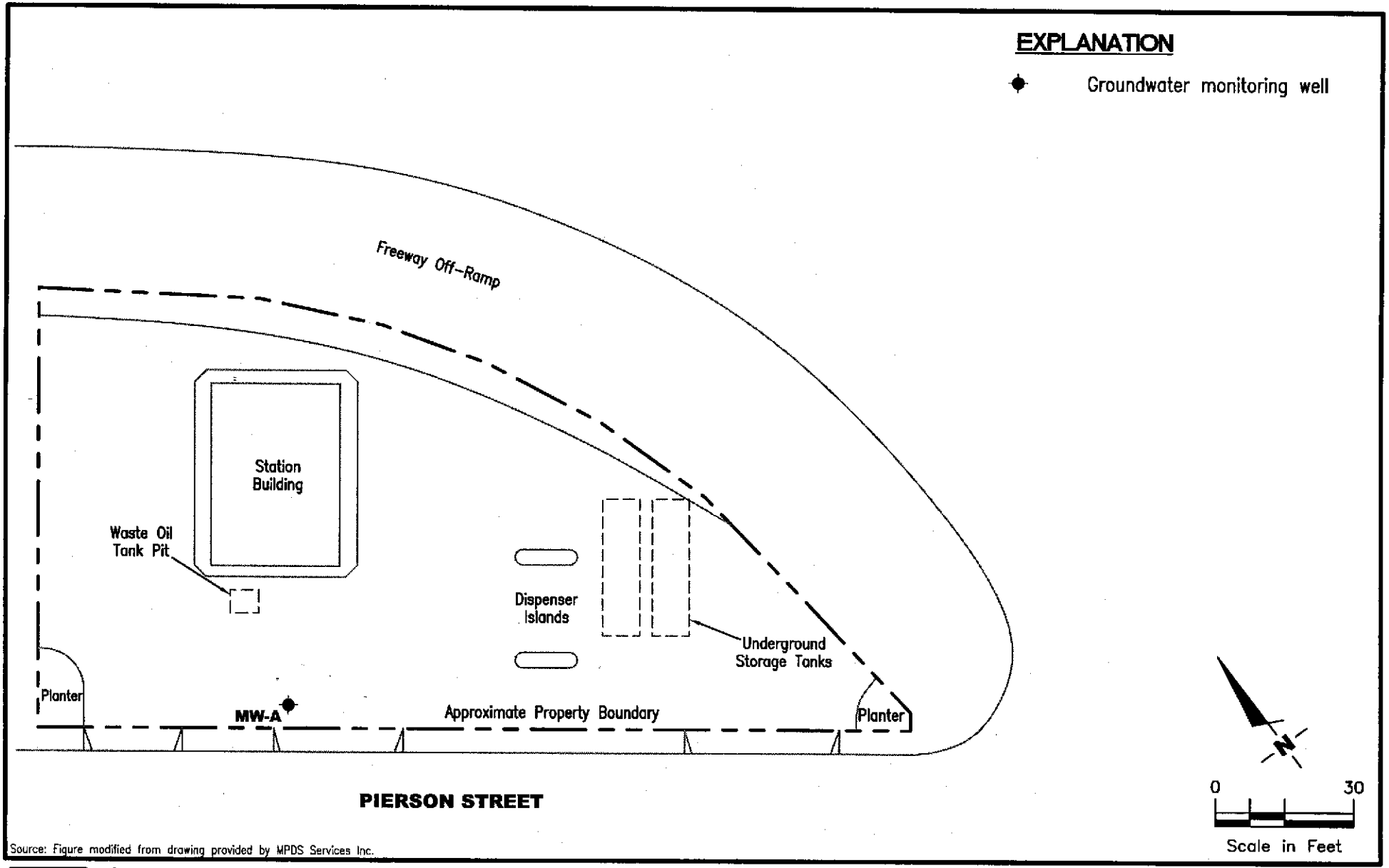
GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

VICINITY MAP
ConocoPhillips (76) Service Station #5781
3535 Pierson Street
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
140088		6/03	

FILE NAME: P:\ENVIRO\CONOCOPHILLIPS-TOSCO\5781\VIC-5781.DWG | Layout Tab: Vic Map



Source: Figure modified from drawing provided by MPDS Services Inc.

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

SITE PLAN
ConocoPhillips (76) Service Station #5781
3535 Pierson Street
Oakland, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
140088.02		6/03	

FILE NAME: P:\ENVIRO\CONOCOPHILLIPS-TOSCO\5781\A03-5781.DWG | Layout Tab: Closure Rpt 6-03

APPENDIX A

SITE CLOSURE SUMMARY

SITE CLOSURE SUMMARY

I. AGENCY INFORMATION

Date: June 30, 2003

Agency Name:	**S.F.B.R.W.Q.C.B.**	Address:	**1515 Clay Street, Suite 1400**
City/State/Zip:	**Oakland, CA 94612**	Phone:	**(510) 622-2374**
Responsible Staff Person:		Title:	

II. SITE INFORMATION

Site Facility Name: Tosco (76) Service Station #5781		
Site Facility Address: 3535 Pierson Street		
RB LUSTIS Case No.	Local or LOP Case No.:	Priority:
URF Filing Date: Unknown	SWEEPS No.:	

Responsible Parties (include addresses and phone numbers)

ConocoPhillips - Mr. David De Witt (916) 558-7666

76 Broadway

Sacramento, CA 95818

Tank No.	Size in Gallons	Contents	Closed In-Place/Removed?	Date
1	10,000	Gas	Removed	12/89
2	10,000	Gas	Removed	12/89
3	280	Waste Oil	Removed	12/89
4	12,000	Gasoline	Active	5-03
5	12,000	Gasoline	Active	5-03
6	520	Waste Oil	Active	5-03

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Waste oil tank failure released petroleum hydrocarbons.

Site characterization complete? **Yes**	Date Approved By Oversight Agency:	
Monitoring wells installed? **Yes**	Number: 1	Proper screened interval? **No, screen is submerged**
Highest GW Depth Below Ground Surface: **11.24**	Lowest Depth: **19.88**	Flow Direction: **NA**

Most Sensitive Potential Use and Probability of Use: Continued operation of service station

Are drinking water wells affected? **No**	Aquifer Name: NA
Is surface water affected? **No**	Nearest SW Name: Small pond (Appx 2,800 feet East of site)

Off-Site Beneficial Use Impacts (Addresses/Locations): There closest known water wells are located approximately 2,193 feet northeast of the site.

Report(s) on file?	No	Where is report(s) filed? NA

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	4 Tanks	Removed from site and recycled	12/89
Piping	NA	Removed and disposed of	12/89
Soil	450 cubic yards	Disposed at approved landfill	1/90
Soil	50 cubic yards	Disposed at approved landfill	3/90
Other	NA		

MAXIMUM DOCUMENTED POLLUTANT CONCENTRATIONS—BEFORE AND AFTER CLEANUP

POLLUTANT	Soil (ppm)		Water (ppb)		POLLUTANT	Soil (ppm)		Water (ppb)	
	Before	After	Before	After		Before	After	Before	After
TPH (Gas)	**670**	**220**	**<50**	**<50**	**Xylenes**	**17**	**23**	**2.1**	**<0.50**
TPH (Diesel)	**8,300**	**1,400**	**131**	**93**	**Ethylbenzene**	**2.3**	**7.3**	**<0.50**	**<0.50**
Benzene	**5.4**	**2.3**	**0.61**	**<0.50**	**Oil & Grease**	**48,000**	**17,000**	**7,000**	**5,900**
Toluene	**15**	**2.1**	**1.5**	**<0.50**					
MTBE	**NA**	**NA**	**<5.0**	**<2.0**					

Comments (Depth of Remediation, etc.): During waste oil UST removal, impacted soil was overexcavated to 16 feet bgs over an area of approximately 400 ft^2.

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: Continued maintenance of regulatory compliant UST, product piping and dispensing equipment.		
Monitoring Wells Decommissioned: **No**	Number Decommissioned: 0	Number Retained: 1
List Enforcement Actions Taken: **NONE**		
List Enforcement Actions Rescinded: **N/A**		

V. TECHNICAL REPORTS, CORRESPONDENCE ETC., THAT THIS CLOSURE RECOMMENDATION WAS BASED UPON

Title:	Date:
United States Geologic Survey, Topographic Map, Oakland East Quadrangle	1980
KEI / Preliminary Groundwater Investigation	1/22/91
Gettler-Ryan Inc. / Groundwater Monitoring and Sampling Event	4/2/03

VI. ADDITIONAL COMMENTS, DATA, ETC.

PLEASE INCLUDE/ATTACH THE FOLLOWING AS APPROPRIATE:

1) SITE MAP INDICATING TANK PIT LOCATION, MONITORING WELL LOCATION, GROUNDWATER GRADIENT, ETC.; AND,

2) SITE COMMENTS WORTHY OF NOTICE (E.G., AREA OF RESIDUAL POLLUTION LEFT IN PLACE, DEED NOTICES ETC.)

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5781

3535 Pierson Street

Oakland, California

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (msl)	TPH-D (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-A	12/18/90[1]	--	--	73	ND	ND	ND	ND	ND	--
	05/03/91[1]	--	--	ND	ND	ND	ND	ND	ND	--
	08/07/91[1]	--	--	ND	ND	ND	ND	ND	ND	--
	11/08/91[1]	--	--	ND	ND	ND	ND	ND	ND	--
151.80	02/06/92[1]	19.88	131.92	ND	ND	ND	ND	ND	ND	--
	08/04/92[1]	18.95	132.85	ND	ND	ND	ND	ND	0.51	--
	02/10/93[1]	17.71	134.09	ND	ND	ND	ND	ND	ND	--
	02/10/94[1]	15.25	136.55	ND	ND	ND	0.52	ND	0.92	--
	02/09/95[1]	15.68	136.12	ND	ND	ND	ND	ND	ND	--
	02/06/96[2]	12.52	139.28	120[3]	ND	ND	ND	ND	2.1	--
	02/05/97[1]	13.01	138.79	61[4]	ND	ND	ND	ND	ND	ND
	02/02/98[1,5]	11.91	139.89	ND	ND	ND	ND	ND	ND	ND
	02/22/99[6]	11.24	140.56	ND	ND	ND	ND	ND	ND	ND
	02/26/00[7]	12.16	139.64	ND	ND	ND	1.01	ND	ND	ND
	03/07/01[8]	11.91	139.89	131[9]	ND	ND	ND	ND	ND	ND/ND[10]
	02/22/02[8]	14.08	137.72	<50	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	02/22/03[12,13]	**14.41**	**137.39**	**93[11]**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.0/<2.0[10]**
Trip Blank										
TB-LB	02/02/98	--	--	--	ND	ND	ND	ND	ND	ND
	02/22/99	--	--	--	ND	ND	ND	ND	ND	ND
	02/26/00	--	--	--	ND	ND	ND	ND	ND	ND
	03/07/01	--	--	--	ND	ND	ND	ND	ND	ND
	02/22/02	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0
QA	**02/22/03**	**--**	--	**--**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.0**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5781

3535 Pierson Street

Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory results prior to February 2, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing elevation
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
MSL = Mean Sea Level
TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether

(ppb) = Parts per billion
(ppm) = Parts per million
ND = Not Detected
-- = Not Measured/Not Analyzed
TOG = Total Oil and Grease
QA = Quality Assurance/Trip Blank

* TOC elevation has been surveyed relative to Mean Sea Level (msl) (Elevation = 119.80 msl).

1 TOG and all EPA Method 8010 compounds were ND.

2 TOG and all EPA Method 8010 compounds were ND except for tetrachloroethene, which was detected at a concentration of 1.8 ppb.

3 Laboratory report indicates the hydrocarbons detected did not appear to be diesel.

4 Laboratory report indicates the hydrocarbons detected appeared to be diesel and non-diesel mixture.

5 All EPA Method 8010 constituents were ND. Total recoverable petroleum hydrocarbons TRPH/TOG by SM 5520 B&F, was detected at 7 ppm.

6 TOG and all EPA Method 8010 compounds were ND except for Methylene chloride, which was detected at a concentration of 10 ppb.

7 TOG and all EPA Method 8010 compounds analyzed by EPA Method 8260B were ND except for Bromodichloromethane, which was detected at a concentration of 7.33 ppb, and Chloroform at 44.8 ppb.

8 TOG and all EPA Method 8021B compounds were less than the reporting limit.

9 Laboratory report indicates unidentified hydrocarbons C9-C24.

10 MTBE by EPA Method 8260.

11 Laboratory report indicates hydrocarbon pattern is present in the fuel quantitation range but does not resemble the pattern of the requested fuel.

12 All VOCs by EPA Method 8260 were less than the reporting limit.

13 TOG was detected at 5,900 ppb.

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Tosco (Unocal) Service Station #5781

3535 Pierson Street

Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
MW-A	03/07/01	ND	ND	ND	ND	ND	ND	ND	ND
	02/22/03	**<500**	**<100**	**<2.0**	**<2.0**	**<2.0**	**<2.0**	**<2.0**	**<2.0**

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
(ppb) = Parts per billion
ND = Not Detected

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

KEI-P89-1204.R8
January 21, 1991

TABLE 3

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on December 11, 1990)

Sample Number	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
MWA(32.5)*	32.5	ND	ND	ND	ND	ND	ND
Detection Limits		1.0	1.0	0.0050	0.0050	0.0050	0.0050

* TOG was 36 ppm and all halogenated volatile organics per EPA method 8010 were non-detectable.

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

KEI-P89-1204.R8
January 21, 1991

TABLE 4

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on December 14, 1989 & January 17, 1990)

Sample	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethylbenzene
A1	12.5	3.5	ND	ND	ND	ND
B1	12.5	ND	ND	ND	ND	ND
A2/B2	12.5	5.8	0.10	ND	ND	ND
SW1	10.5	15	ND	ND	ND	ND
SW2	10.5	46	0.65	ND	ND	ND
P1	5.5	ND	ND	ND	ND	ND
P2	6.0	ND	ND	ND	ND	ND
WO1*	6	670	5.4	15	17	2.3
Detection Limits		1.0	0.05	0.1	0.1	0.1

* All EPA method 8010 compounds were non-detectable, except 1,2-dichlorobenzene at 10 ppb, tetrachloroethene at 77 ppb, and 1,1,1-trichloroethane at 15 ppb. Metals concentrations were as follows: cadmium non-detectable, chromium 8.3 ppm, lead 340 ppm, and zinc 70 ppm. TPH as diesel showed 8,300 ppm, and TOG showed 48,000 ppm.

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

KEI-P89-1204.R8
January 21, 1991

TABLE 5

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on February 22, 1990)

Sample	Depth (feet)	TOG	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
WO1(16)*	16.0	910	74	15	0.060	ND	2.0	0.10
SWA**	9.0	17,000	1,400	220	2.3	2.1	23	7.3
SWB*	10.0	ND	ND	2.0	ND	ND	ND	ND
SWC***	10.0	4,100	460	63	0.31	0.33	2.2	1.3
SWD+	10.0	6,400	360	40	0.32	ND	4.0	0.49
Detection Limits		50	1.0	1.0	0.05	0.10	0.10	0.10

* All EPA method 8010 compounds were non-detectable.

** All EPA method 8010 compounds were non-detectable, except tetrachloroethene at 160 ppb.

*** All EPA method 8010 compounds were non-detectable, except tetrachloroethene at 56 ppb.

\+ All EPA method 8010 compounds were non-detectable, except tetrachloroethene at 40 ppb and 1,1,1-trichloroethane at 5.8 ppb.

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

KEI-P 9-1204.R8
Janua y 21, 1991

TABLE 6

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on April 9 & 10, 1990)

Samp e Numb r	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
MW1( )*	5	ND	ND	ND	ND	ND	ND
MW1(.5)*	9.5	ND	ND	ND	ND	ND	ND
MW1(5)*	15	ND	ND	ND	ND	ND	ND
MW1(0)*	20	ND	ND	ND	ND	ND	ND
MW1(5)*	25	ND	ND	ND	ND	ND	ND
MW1(0)*	30	ND	ND	ND	ND	ND	ND
MW1(5)*	35	ND	ND	ND	ND	ND	ND
MW1(0)*	40	ND	ND	ND	ND	ND	ND
MW1(5)*	45	ND	ND	ND	ND	ND	ND
MW1(0)*	50	ND	ND	ND	ND	ND	ND
MW2( )	5	ND	ND	ND	ND	ND	ND
MW2(0)	9.5	ND	ND	ND	ND	ND	ND
MW2(2)	12	ND	ND	ND	ND	ND	ND
MW2(5)	15	ND	ND	ND	ND	ND	ND
MW2(0)	20	ND	ND	ND	ND	ND	ND
MW2(5)	25	ND	ND	ND	ND	ND	ND
MW2(0)	30	ND	ND	ND	ND	ND	ND
MW2(5)	35	ND	ND	ND	ND	ND	ND
MW2(0)	39.5	ND	ND	ND	ND	ND	ND
MW3( )	5	ND	ND	ND	ND	ND	ND
MW3(0)	10	ND	ND	ND	ND	ND	ND
MW3(5)	15	ND	ND	ND	ND	ND	ND
MW3(0)	20	ND	ND	ND	ND	ND	ND
MW3(5)	25	ND	ND	ND	ND	ND	ND
MW3(0)	30	ND	ND	ND	ND	ND	ND
MW3(5)	35	ND	ND	ND	ND	ND	ND
MW3(0)	40	ND	ND	ND	ND	ND	ND
Dete tion Limi s		1.0	1.0	0.0050	0.0050	0.0050	0.0050

* T G and all EPA method 8010 compounds were all non-detectable.

ND = Non-detectable.

Resu ts in parts per million (ppm), unless otherwise indicated.

KEI-P89-1204.R8
January 21, 1991

TABLE 7

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on July 5 & 6, 1990)

Sample Number	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
EB1(8.5)*	ND	ND	ND	0.014	0.0056	ND
EB1(13.5)*	ND	ND	ND	0.015	ND	ND
EB1(18.5)*	ND	ND	ND	0.017	0.024	0.011
EB1(23.5)*	ND	ND	ND	0.011	ND	ND
EB1(28.5)*	ND	ND	ND	0.012	ND	ND
EB2(9.5)*	ND	1.2	ND	0.038	0.016	0.012
EB2(12.5)*	ND	ND	0.0090	0.025	0.0060	ND
EB2(16.5)*	ND	ND	ND	0.021	0.0050	ND
EB2(22)*	ND	ND	ND	0.020	ND	ND
EB2(26.5)*	ND	ND	ND	0.017	ND	ND
EB2(32)	ND	ND	ND	ND	ND	ND
Detection Limits	1.0	1.0	0.0050	0.0050	0.0050	0.0050

* TOG and all EPA 8010 compounds were non-detectable, except 1,1,1-trichloroethane at 6.2 ppb in EB1(28.5).

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.

KEI-P89-1204.R8
January 21, 1991

TABLE 8

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on July 6, 1990)

Sample Number	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethylbenzene
EB1*	6.7	ND	ND	1.5	1.0	ND
EB2*	ND	ND	0.61	1.5	1.0	ND
Detection Limits	50	30	0.3	0.3	0.3	0.3

* TOG and EPA 8010 compounds were non-detectable.

ND = Non-detectable.

Results in parts per billion (ppb), unless otherwise indicated.

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
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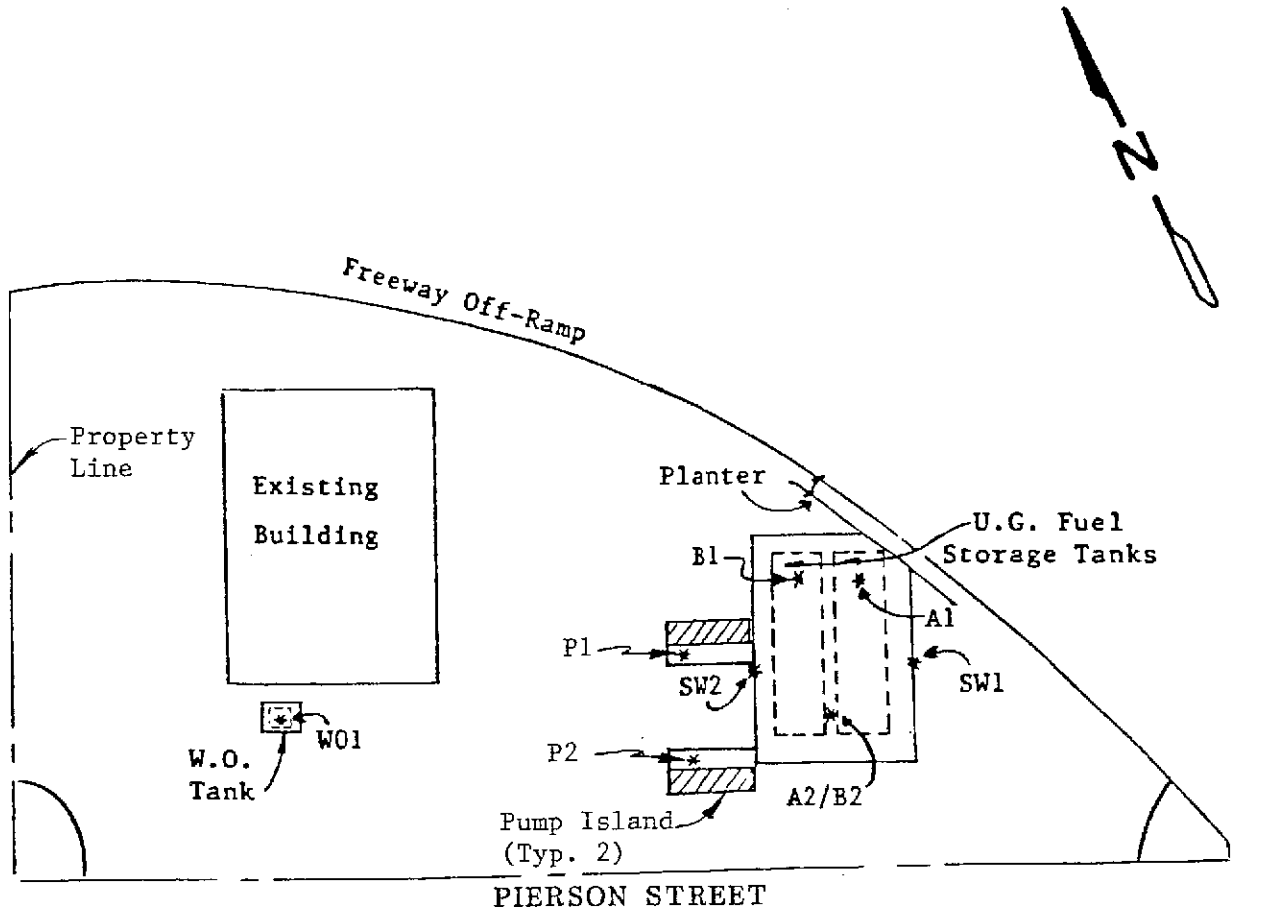

SITE PLAN
Figure 1

LEGEND

* Sample Point Location

Unocal S/S #5781
3535 Pierson Street
Oakland, CA

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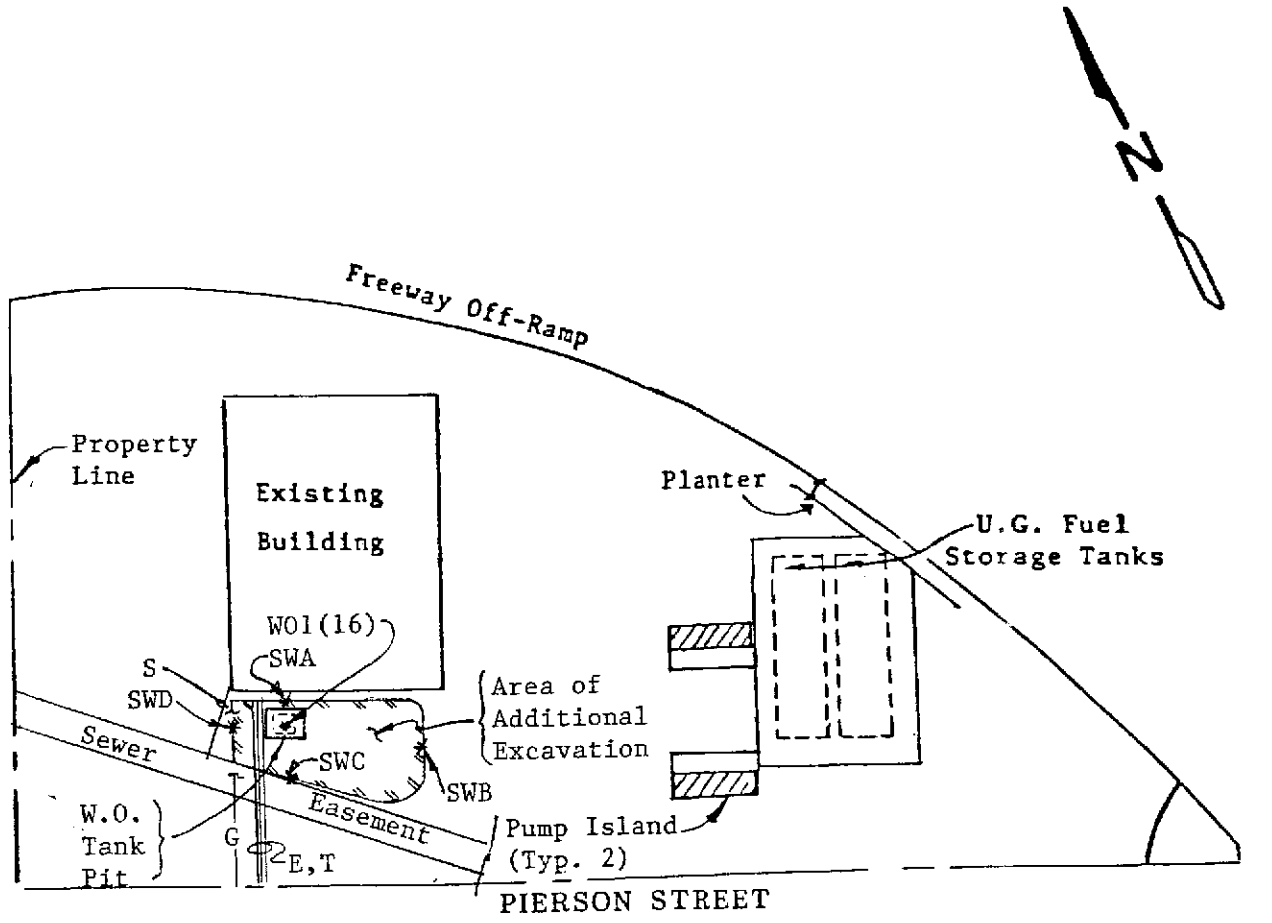

SITE PLAN
Figure 2

0 30 60
Approx. Scale feet

LEGEND

* Sample Point Location
E Electrical
T Telephone
G Natural Gas
S Sewer

Unocal S/S #5781
3535 Pierson Street
Oakland, CA

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Consulting Engineers
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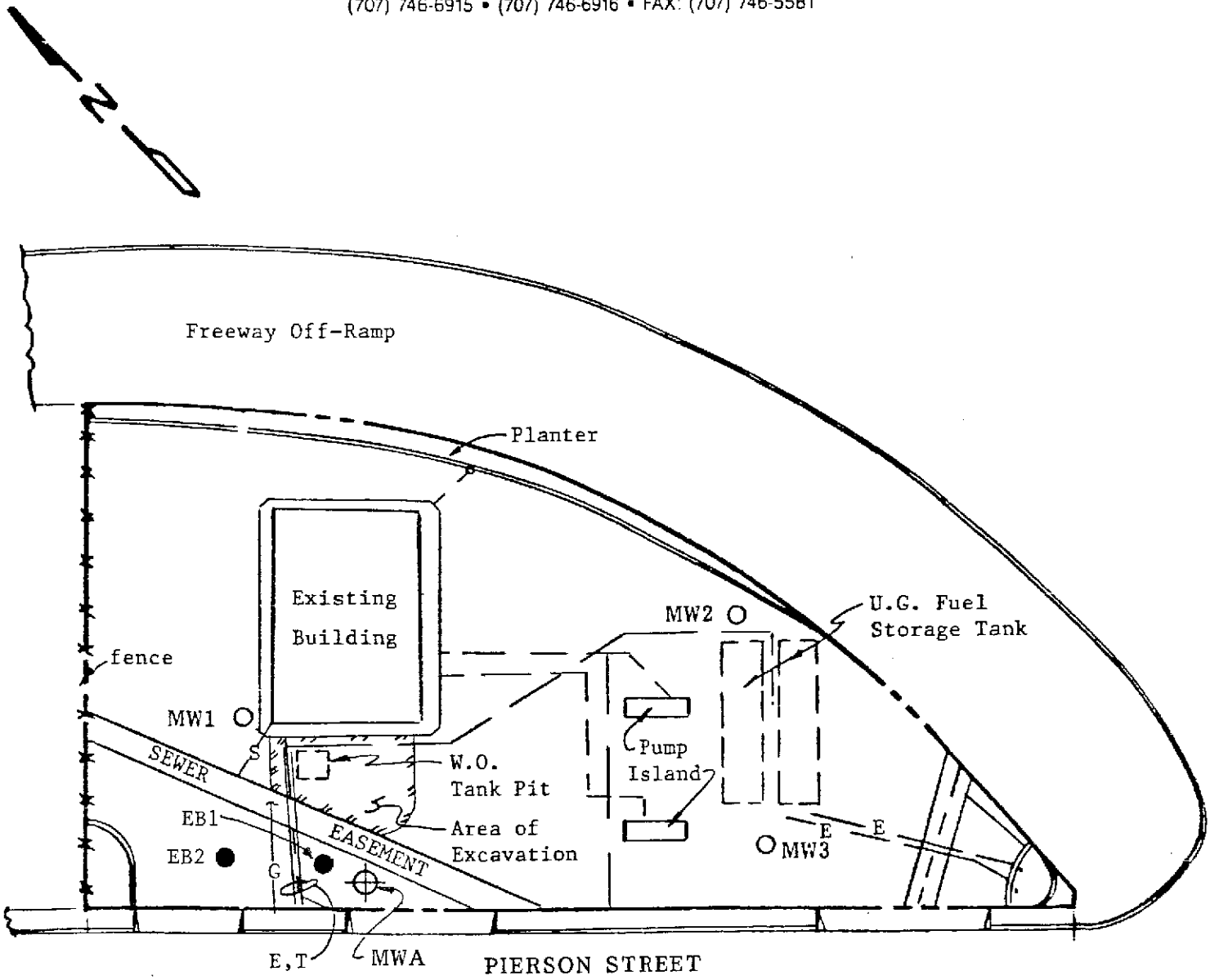

SITE PLAN
Figure 3

0 30 60
Approx. Scale feet

LEGEND

- ● Exploratory Boring (drilled 7/5 & 7/6/90)
- E U.G. Electrical Line
- T U.G. Telephone Line
- G U.G. Natural Gas Line
- S U.G. Sewer Line
- ○ Exploratory Boring (drilled 4/9 & 4/10/90)
- ⊕ Monitoring Well

Unocal Service Station #5781
3535 Pierson Street
Oakland, California

Leaking Underground Fuel Tank Report

UNOCAL (OAKLAND)
3535 PIERSON ST
OAKLAND , CA 94619
(Show this Site on Map)

Regional Board - Case #: 01-1592
SAN FRANCISCO BAY RWQCB (REGION 2) - **(CTH)**
Local Agency (lead agency) - Case #: 1111
ALAMEDA COUNTY LOP - **(UNK)**

Choose a Report To View

Site Info:
- Regulatory History
- Locational Information
- Analytical Data

Leak Info:
- Detailed Release Information
- Remediation on Site

Additional Info:
- **0 Monitoring Wells For This LUFT Site**
- **4 Public Water Well(s) Estimated to be Within 1/2 Mile of this LUFT Site**

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Wells Within 1/2 Mile

UNOCAL (OAKLAND)
3535 PIERSON ST
OAKLAND , CA 94619
(Show this Site on Map)

Regional Board - Case #: 01-1592
SAN FRANCISCO BAY RWQCB (REGION 2) - (CTH)
Local Agency (lead agency) - Case #: 1111
ALAMEDA COUNTY LOP - (UNK)

Water System Name	Water System ID	Well Name	Common Well Name	Dist To LUFT
EASY BAY REGIONAL PARK DISTRCT	0707641	0707641-001GEN	LPA REPORTED PRIMARY SOURCE	2193 Feet
EAST BAY REGIONAL PARK DISTRCT	0707642	0707642-001GEN	LPA REPORTED PRIMARY SOURCE	2193 Feet
EASY BAY REGIONAL PARK DISTRCT	0707643	0707643-001GEN	LPA REPORTED PRIMARY SOURCE	2193 Feet
EASY BAY REGIONAL PARK DISTRCT	0707644	0707644-001GEN	LPA REPORTED PRIMARY SOURCE	2193 Feet

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