September 27, 2001

Mr. David DeWitt Tosco Marketing Company 2000 Crow Canyon Place, Suite 400 San Ramon, CA 94583

Subject:

Transmittal of Well Survey Results, Site Information Summary and Request For Closure for the Tosco (76) Service Station No. 7004, located at 15599 Hesperian Boulevard, San Leandro, California

Dear Mr. DeWitt:

This document was prepared by Gettler-Ryan Inc. (GR) at the request of Tosco Marketing Company (Tosco), and transmits the Well Survey Results and Site Information Summary (SIS) for the above referenced facility, and based on the discussion and findings, also requests low-risk case closure status.

The site is a former Tosco (76) Service Station which was demolished in May of 2000. At that time all subsurface tanks and piping and aboveground components were removed. The site is currently a paved parking lot within a Target department store complex, and is situated adjacent to a Kragen Auto Parts store. The site is located at the northwest corner of Hesperian Boulevard and Lewelling Boulevard, in San Leandro, California (Figure 1). There are six groundwater monitoring wells and one groundwater recovery well at the site (Figure 2). The site is situated on relatively flat terrain, and San Lorenzo Creek is located approximately 800 feet to the southwest. San Lorenzo Creek flows toward the southwest and ultimately drains into San Francisco Bay.

Well Survey

In May of 2001, GR contacted the Alameda County Public Works Agency and requested a ½-mile radius well search be performed. The results of the search indicated that 3 domestic water wells are present within 2,500 feet of the site. Of the three identified wells, two are located in potentially downgradient directions. These two wells (well No.'s 1 and 2 on Figure 3) are located 1,650 and 2,300 feet from the site, respectively. The third well is located approximately 2,275 feet east-southeast of the site, in the upgradient direction. Based on the distance from the site, it is unlikely that groundwater from beneath the site has impacted the identifies wells.

The City of Oakland and the surrounding areas of San Leandro and San Lorenzo receive their municipal drinking water supply via aqueduct from the Pardee or Comanchee Reservoirs in Northern California.

This report and attachments contain well location and construction details obtained from water well driller's reports filed with DWR. California Water Code Section 13753 states that these reports are confidential and not for public use or inspection. Therefore, this report or its attachments should not be placed in files accessible to the general public.

Hydrology

San Lorenzo Creek is located approximately 800 feet southwest of the site. The next closest surface water is Estudillo Canal, located approximately 2,300 feet to the northwest. Both of these water bodies flow generally to the west/southwest, and ultimately empty into San Francisco Bay. Historical groundwater monitoring data indicate that groundwater flow direction beneath the site has been predominantly toward the west-southwest (Figure 4) at an average gradient of 0.003 to 0.02 feet/feet. Groundwater beneath the site has remained at approximately the same elevation since 1993, at approximately 22 feet above mean sea level (MSL), with seasonal fluctuations of up to 3 feet.

Previous Environmental Work

- 1990 Removal of three gasoline USTs, and associated product piping. Overexcavation and offsite disposal of 1,600 cubic yards of hydrocarbon impacted soil. Removal and offsite disposal of 5,000 gallons of groundwater from the UST pit.
- 1991 Installation of three 2-inch diameter groundwater monitoring wells (MW-1 through MW-3). Initiation of quarterly monitoring and sampling. Installation of three additional 2-inch diameter groundwater monitoring wells (MW-4 through MW-6).
- 1992 Installation of one 6-inch diameter groundwater recovery well (RW-1). Conducted an aquifer pump test.
- 1996 Installation of Oxygen Releasing Compound (ORC) in monitoring well MW-5. Monitoring and sampling schedule reduced to semi-annual.
- 1999 Removal of ORC from well MW-5.
- 2000 Removal of two gasoline USTs and associated product piping. Installation of 360 pounds of ORC slurry in the bottom of the UST pit. Demolition of all above ground structures.
- 2001 Well Search performed by GR. Continuation of semi-annual groundwater monitoring and sampling.

Current Site Conditions

The extent of soil impact at the site is delineated. During removal of gasoline USTs and product piping conducted in 2000, confirmation samples collected and analyzed by the laboratory indicate that elevated concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg) remained in only one sample location from the sidewall of the former UST pit (350 parts per million (ppm)). Benzene and Methyl tert-Butyl Ether (MtBE) were not detected in any of the confirmation soil samples from the former UST pit sidewall. Soil samples collected in the vicinity of the former product lines and dispensers revealed that no hydrocarbon impact was detected in the soil. Hydrocarbons detected in soil during the 1990 UST removal and subsequent monitoring well installations were found in what is now the saturated zone. Much of this impacted soil was overexcavated during the 1990 UST removal event. Based on the one isolated detection of TPHg in soil during the May 2000 UST removal, mass calculations for hydrocarbons remaining in soil were not prepared.

Groundwater analytical results from most recent semi-annual sampling event indicate that benzene is not present in any of the six monitoring wells or the one recovery well at the site. TPHg was detected in only one well (MW-3) at a concentration of 13,000 parts per billion (ppb) and the laboratory reports that the detected compound is weathered gasoline. MtBE was detected in three of the monitoring wells, at concentrations ranging from 6.0 to 1,900 ppb. Concentrations of MtBE in the wells have shown a general decline in concentrations, except for well RW-1 which had a recent spike in concentration. TPHg and MtBE have not been detected in wells MW-1 and MW-6 since January of 1999. Wells MW-2 through MW-5 and RW-1 show an overall declining trend in MtBE concentrations (Charts 1 through 5).

Isoconcentration maps were prepared for TPHg and MtBE based on the recent quarterly monitoring results (Figures 5 and 6). These figures show that the hydrocarbon plume is primarily restricted to groundwater beneath the site. Mass calculations for TPHg and MtBE remaining in groundwater were prepared based on the isoconcentration maps. Results of the calculations indicate that a total of approximately 13 pounds of TPHg and 3.9 pounds of MtBE remain in groundwater beneath the site.

Summary

The attached Site Information Summary form contains information about the site, results of initial site assessment and remediation, impacted groundwater plume trends, summary tables of historical soil and groundwater sample data, boring logs and figures showing the locations of pertinent site features and sample locations.

3

140106.04

The following conditions have been found at the site:

- 1. Hydrocarbon source soils were removed in 1990 during UST replacement and subsequent overexcavation of 1,600 cubic yards of impacted soil.
- 2. Petroleum hydrocarbons are no longer dispensed from the site, therefore, existing concentrations of dissolved hydrocarbons are expected to naturally attenuate.
- 3. Free product has not been detected in any monitoring well to date.
- 4. The groundwater beneath the City of San Leandro is not used as a municipal drinking water supply. This precludes the impacted shallow aquifer from affecting human health in the site vicinity.
- 5. The site has been adequately characterized. Historical groundwater data collected between May 1991 and July 2001 indicate that the hydrocarbon plume is stable and has been predominantly restricted to groundwater beneath the site. Concentrations of TPHg have only been detected in one well during the last four sampling events. Concentrations of benzene have been below California Department of Health Services (DHS) primary Maximum Contaminant Level (MCL) of 1.0 ppb in all wells for the last four sampling events, with the exception of a single detection in well MW-3 (38.4 ppb on 1/19/01). Concentrations of MtBE detected in downgradient well MW-4 have been below the DHS primary MCL of 13 ppb since July 2000. Additionally, concentrations of MtBE in downgradient well MW-5 have shown a downward trend since July 1999.
- 6. The groundwater plume is well defined in all directions including the downgradient flow direction. Mass calculations indicate that very low quantities of TPHg (13.17 lbs) and MtBE (3.9 lbs) remain in groundwater beneath the site. Residual dissolved hydrocarbons should naturally attenuate with time.
- 7. The nearest sensitive receptors in the downgradient groundwater direction are San Lorenzo Creek, located 800 feet southwest of the site, and two domestic water wells located approximately 1,650 feet south-southwest and 2,300 feet west-northwest of the site. Based on the distance of these receptors from the site, it does not appear that groundwater from beneath the site would impact any of the identified receptors.

Therefore, the site presents no significant risk to the environment. Based on these data, the previous remediation effort and the determination that the impacted groundwater is localized and stable at the site, additional work at the site is not warranted and the site should be considered for low-risk case closure.

If you have any questions or comments regarding this request, please feel free to call either of us.

Sincerely,

Gettler-Ryan Inc.

Yed A. Douglas Project Geologist

Douglas J. Lee Project Manager

R.G. 6882



Attachments: Figure 1 - Site Vicinity Map

Figure 2 – Site Map

Figure 3 - Well Search Map

Figure 4 - Historical Groundwater Flow Directions

Figure 5 – TPHg Isoconcentration Map Figure 6 – MtBE Isoconcentration Map

Table 1 – Well Search Results

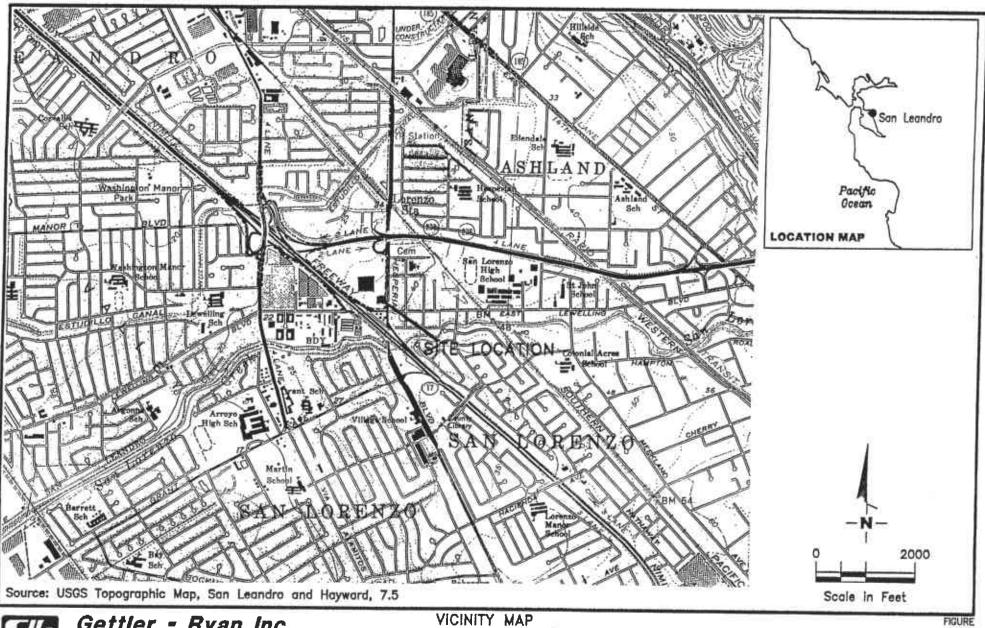
Charts 1 through 5 - Groundwater Concentrations and Elevation versus

Time

Hydrocarbon Mass Calculations in Groundwater

Site Information Summary

cc: Scott Seery - Alameda County Environmental Health Services





Gettler - Ryan Inc.

REVIEWED BY

6747 Sierra Ct., Suite J Dublin, CA 94568

(925) 551-7555

Former Tosco (76) Service Station No. 7004 15599 Hesperian Boulevard San Leandro, California

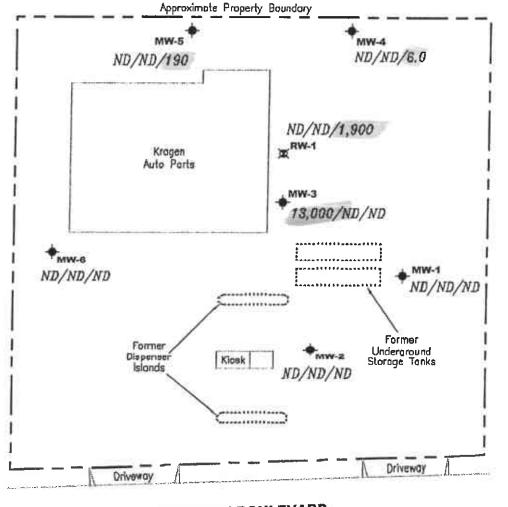
DATE

REVISED DATE

JOB NUMBER 140106

8/00

FILE NAME: P:\EMMRO\TOSCO\7004\A00-7004-MC.DWG | Leyout Tob: CA



EXPLANATION

Groundwater monitoring well

Aquifer testing well

A/B/C TPH(C) (Total Petroleum Hydrocarbons as Gasoline)/ Benzene/MTBE cancentrations in ppb

ND Not Detected

0 40
Scole in Feet

FIGURE

HESPERIAN BOULEVARD

Sources Figure modified from drawing provided by MPDS Services Inc.



CONCENTRATION MAP
Former Tosco (Unocal) Service Station #7004
15599 Hesperian Boulevard

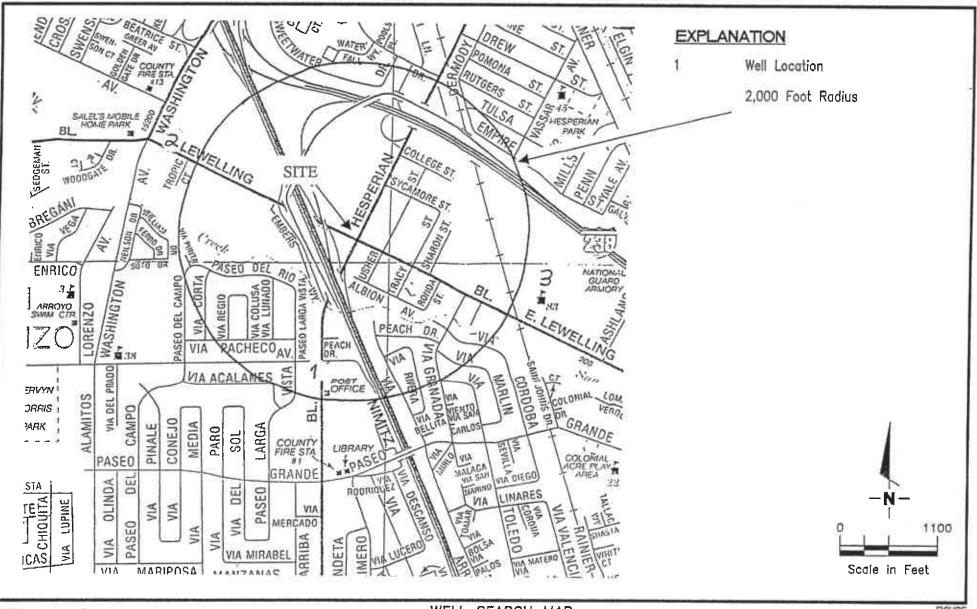
San Leandro, California

REVISED DATE

PROJECT NUMBER 180106

REVIEWED BY

July 31, 2001





Gettler - Ryan Inc.

1364 North McDowell Boulevard Suite 82 Petaluma, CA 94954 (707) 789-3255 WELL SEARCH MAP Former Tosco Service Station No. 7004 15599 Hesperian Boulevard San Leandro, California

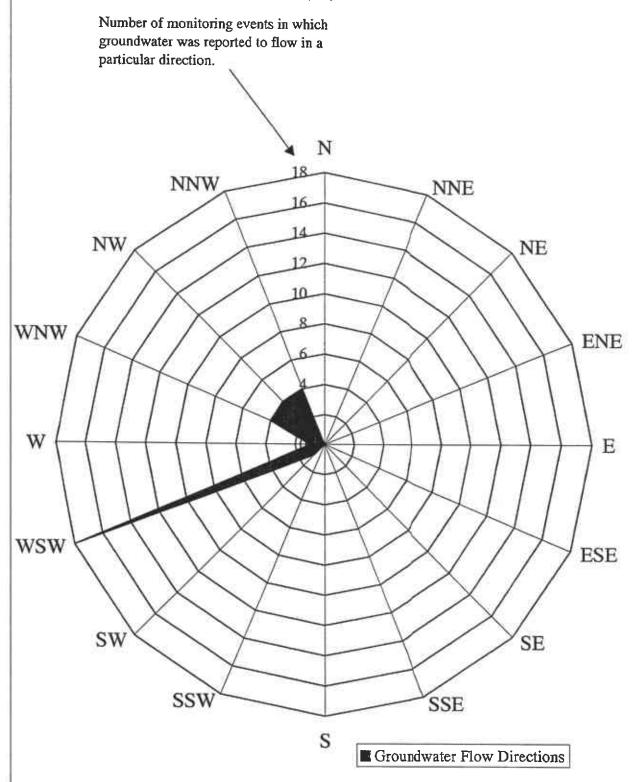
2

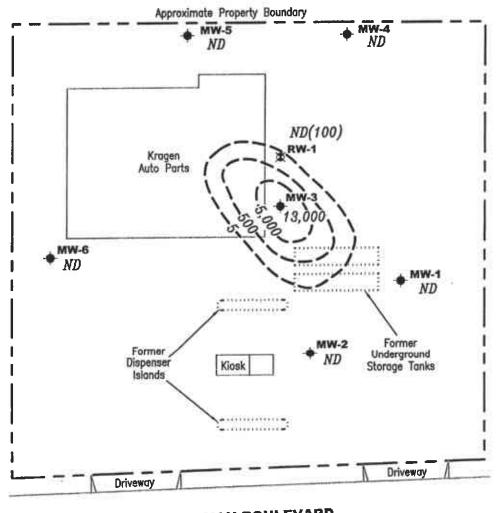
JOB NUMBER 140106.04 REVIEWED BY

05/01

REVISED DATE

Figure 4
Historical Groundwater Flow Directions
for Former Tosco (76) Service Station No. 7004





EXPLANATION

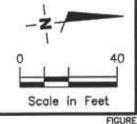
Groundwater monitoring well

Nested piezometer well

500 TPH-G (Total Petroleum Hydrocarbons as Gasoline) concentrations in ppb

500 TPH-G isoconcentration contour
ND Not Detected

HESPERIAN BOULEVARD



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

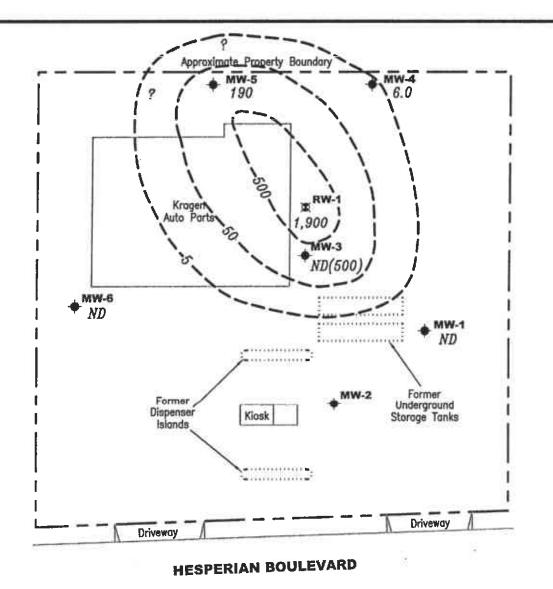
GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

TPH—G ISOCONCENTRATION MAP
Former Tosco (76) Service Station No. 7004
15599 Hesperian Boulevard
San Leandro, California

REVISED DATE

PROJECT NUMBER REVIEWED BY 140106

July 31, 2001



EXPLANATION

Groundwater monitoring well

M Nested piezometer well

500 MTBE concentration in ppb

MTBE isoconcentration contour

ND Not Detected

0 40
Scale in Feet

FIGURE

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



MTBE ISOCONCENTRATION MAP
Former Tosco (76) Service Station No. 7004
15599 Hesperian Boulevard
San Leandro, California

REVISED DATE

PROJECT NUMBER 140106 REVIEWED BY

July 31, 2001

Table 1 Well Search Data

Former Tosco Service Station No. 7004 15599 Hesperian Boulevard San Leandro, California

		90		Maximum			Screen	Interval	Well	
Map	Well	Well	Well	Pumping Rate	Year	Depth	From	To	Diameter	DTW
ID	Owner	Location	Use	(gpm)	Installed	(feet)	(feet)	(feet)	(inches)	(feet)
1	Greenwood Corporation	15803 Hesperian Boulevard	Dom	230	Dec-31	511	29	547	12	-
2	F. Goyette Machine	624 Lewelling Boulevard	Dom	-	Jul-37	75	20	540	8	-
3	San Lorenzo Unified School District	50 East Lewelling Boulevard	Dom	8	Sep-91	194	-	-	б	67

Explanation

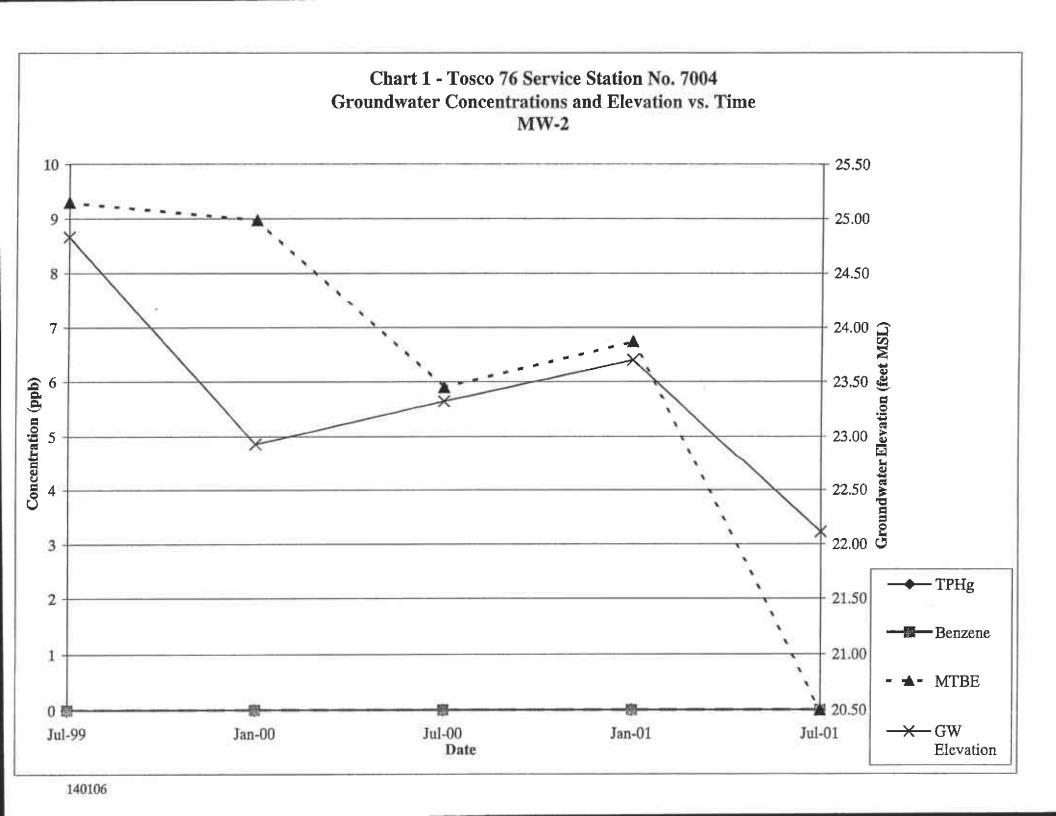
DTW = depth to water gpm = gallons per minute

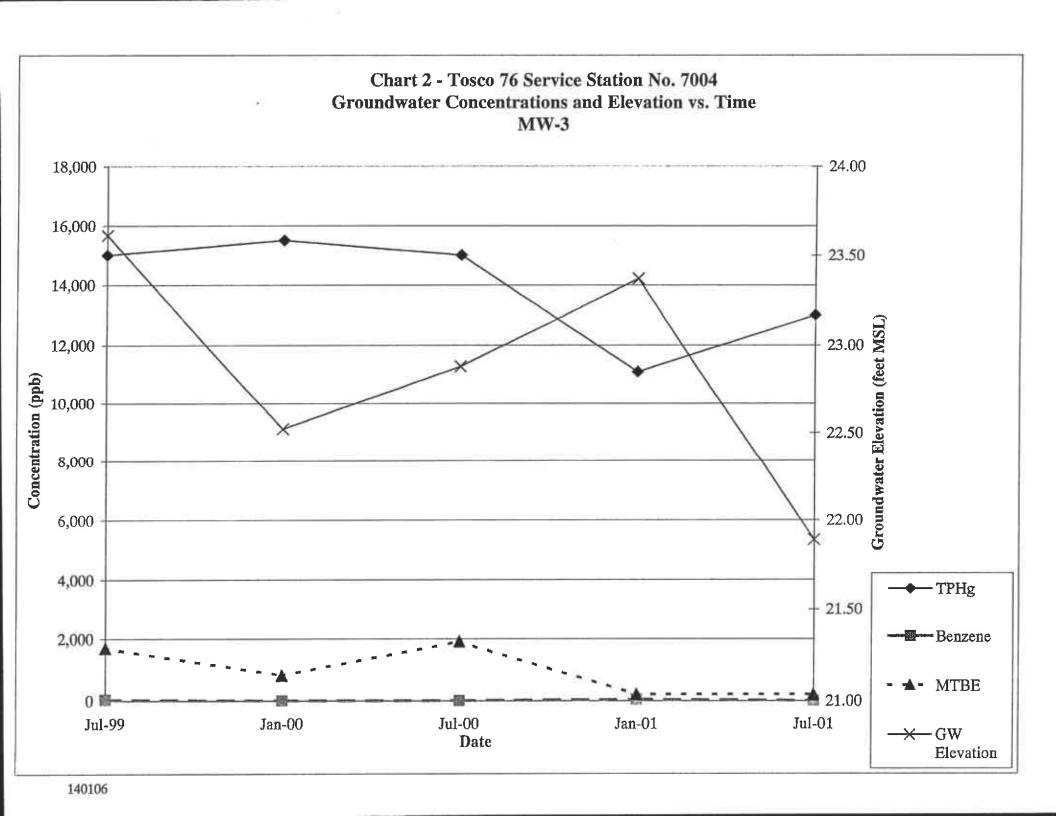
Dom = Domestic

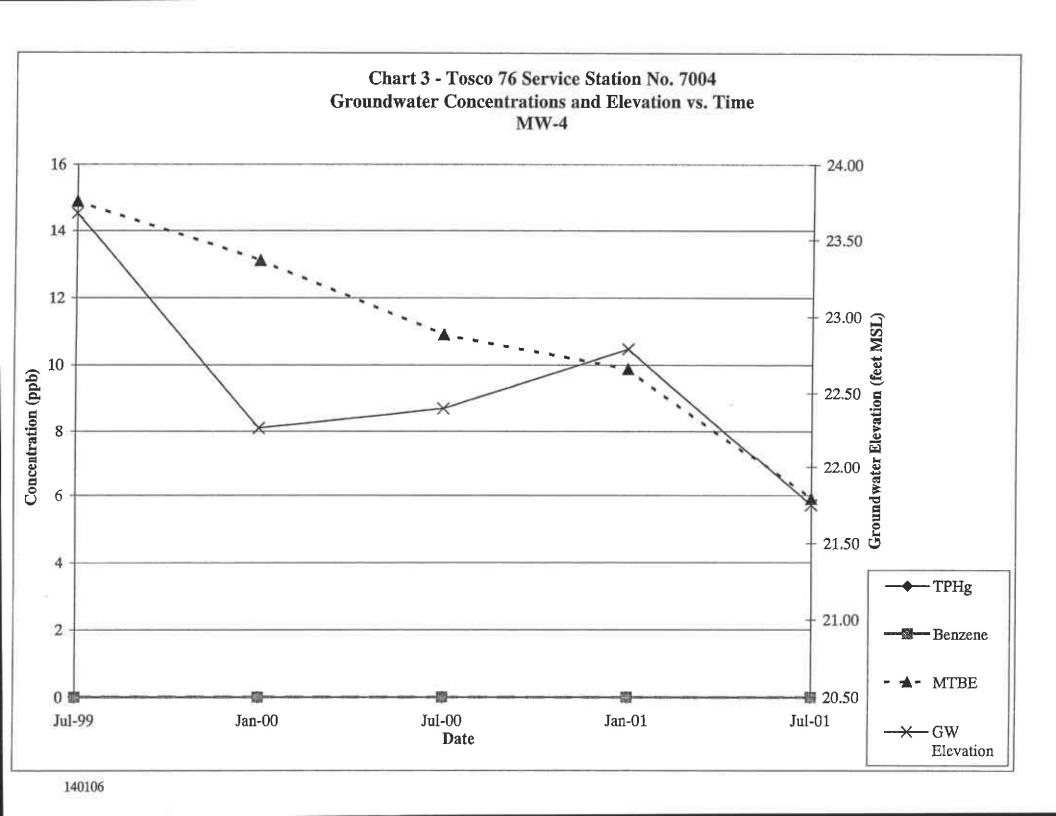
- = information not available

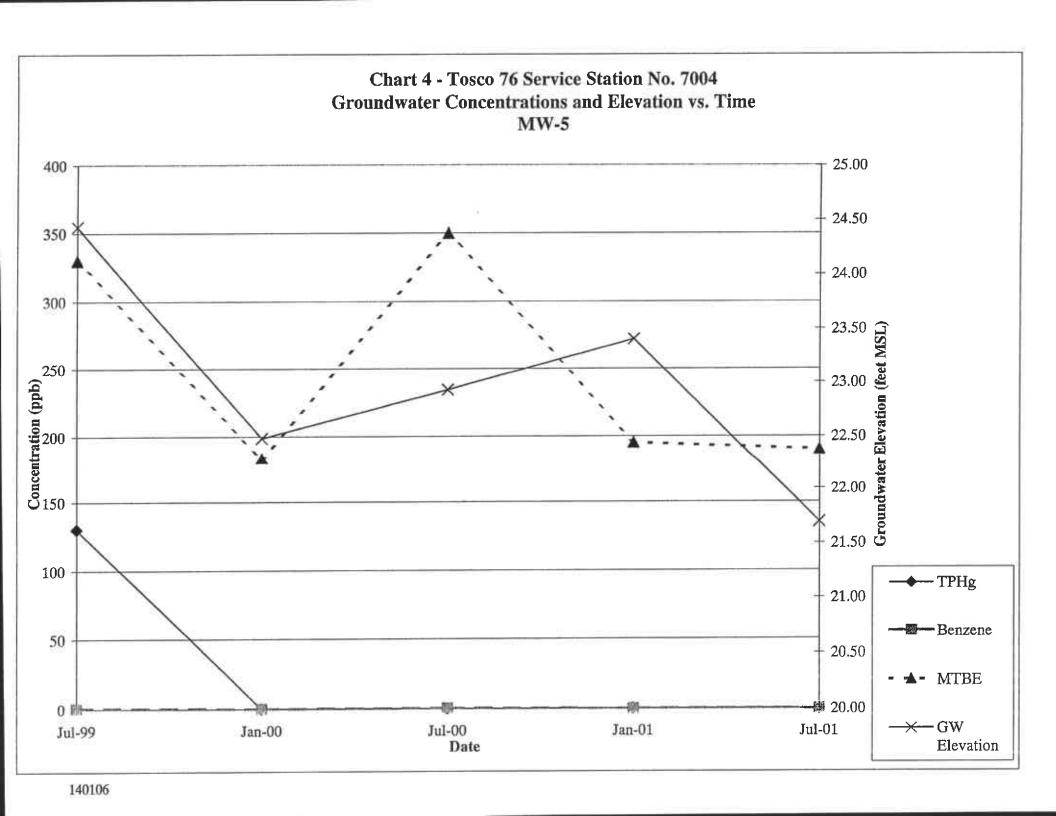
Township/Range/Sections: 3S/2W-3W/1G-24J

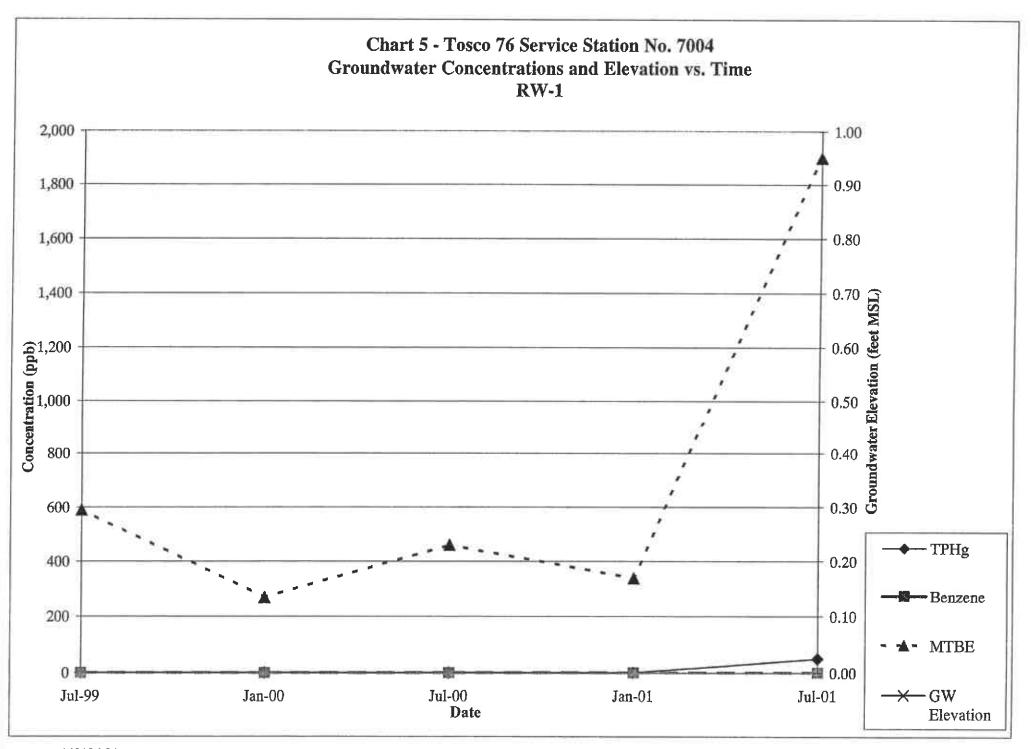
Well Search Performed by: Alameda County Public Works Agency











Hydrocarbon Mass Calculations in Groundwater for Tosco (76) Service Station No. 7004

Assumptions:

- 1. Mass of impacted groundwater is equal to the mass of soil times the porosity of the soil. For TPHg and MTBE, an area approximately equal to the lowest iso-concentration contour is used, times the thickness of impacted groundwater equal to 14.5 feet (depth to water (~13') to bottom of deepest well (~27.5')).
- 2. Porosity of soil in saturated zone is approximately 40%.

TPHg

Volume (V) = 40° x 70° x 14.5° = 40,600 ft³ x 0.40 x 62.4 lbs/ft³ = 1.01 x 10^6 lbs water

Average TPHg concentration = 13,000 ppb = 13.0 ppm

Mass = Volume x Density x Concentration

Mass of TPHg = $(1.01 \times 10^6 \text{ lbs } \times 13.0 \text{ lbs TPHg})/1 \times 10^6 \text{ lbs H}_2\text{O} = 13.17 \text{ lbs TPHg in water}$

MTBE

Volume = 110' x 140' x 14.5' = 223,300 ft³ x 0.40 x 62.4 lbs/ft³ = 5.57 x 10^6 lbs water

Average MtBE concentration = (6.0+190+1900)/3 = 699 ppb = 0.699 ppm

Mass = Volume x Density x Concentration

Mass of MtBE = $(5.57 \times 10^7 \text{ lbs } \times 0.699 \text{ lbs MTBE})/1 \times 10^6 \text{ lbs H}_2\text{O} = 3.9 \text{ lbs MTBE in water}$

SITE INFORMATION SUMMARY

I. SITE INFORMATION

Site Facilit	y Name:	Former Tosco (76)	Service Station No. 7004	<u></u>
Site Facilit	y Address:	15599 Hesperian E	Boulevard	
		San Leandro, Calif	fornia	
RWQCB L	UST Case No.:		URF Filing Date:	· · ·
Responsibl	e Parties (include ad	dress and phone num	nbers) David DeWitt 925-277	-2384
Tosco Mar	keting Company			
2000 Crow	Canyon Place, Suite	: 400		. <u> </u>
San Ramor	ı, CA 94583			
Tank No.	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	12,000	gasoline	removed	Oct-90
2	12,000	gasoline	removed	Oct-90
3	12,000	gasoline	removed	Oct-90
4	12,000	gasoline	removed	May-00
5	12,000	gasoline	removed	May-00

II. INITIAL SITE ASSESSMENT (Information from previous investigations at nearby sites and other available sources may be used for applicable items if necessary)

Cause and Estimated Quantity of Release: unknown		
Nearest Surface Water Bodies (including any	Their Geographical Distances Fro	om the Site:
unnamed creeks, tributaries, canals, etc.):	Their Goographical Distances 110	om tre bre.
San Lorenzo Creek	800 feet southwest	
Estudillo Canal	2,300 feet northwest	
Nearest Domestic Water Wells (both public and	Their Geographical Distances Fro	om the Cites
private) within 2,000 feet:	Their Geographical Distances Fit	om the Site.
Greenwood Corporation	1,650 feet South-Southwest	
Goyette Machine	2,300 feet West-Northwest	
San Lorenzo Unified School District	2,275 feet East-Southeast	
Minimum Groundwater Depth: 10.53 feet below TOC		Flow Direction: WSW
	s situated at an elevation of approx	·
The site vicinity is underlain by Holocene aged coarse grained al		
permeable sand and silt, with a thickness ranging from 10 to 50 f		
approximately 1.5 to 5.5 feet. The fill is underlain by interbedde		
with two somewhat laterally continuous sand units between 8 to		
	s currently a paved parking area for	
shopping center. The surrounding area is composed of commerce		or the adjacent Target
	iai ician iachthes.	
Preferential Pathways Such as Subsurface Utilities? No If You	es. Describe	
Due to the depth to groundwater historically exceeding 10 feet by		lities are actino as
preferential pathways.	5-,	neman and manyie An
Number of Soil Borings: 7	Number of Monitoring Wells: 6	plus one recovery well

140106.04

III. REMEDIATION

Material A	mount (Include Units)	Action (Treatment or Disposal w/Destination	Da	ite
Free Product	NA			
Soil	1,600 cubic yards	Disposed at BFI Landfill in Livermore, CA	Dec-91	
Groundwater	5,000 gallons	disposed at Tosco refinery	Oct-90	
Vapor	NA		30,70	

	M.A	XIMUM D	OCUMEN	TED SOIL	POLLUTANT CON	JCENTRATI	ONS		
	1 _	ation		(ppm)			ation	Soil (ppm	
Pollutant	Dat	Date(s)		Residual	Pollutant	Date(s)		Initial	Resid
TPH (Gas)	Apr-91	May-00	4800	350	Xylene	Apr-91	May-00	290	0.83
TPH (Diesel)			NA	NA	Ethylbenzene	Anr-91	May-00	41	4.8

0.83 4.8 Benzene Apr-91 May-00 23 ND Oil & Grease NA NΑ Toluene Apr-91 May-00 9.1 ND Heavy Metals NA NA MTBE May-00 NA ND Motor Oil NA NA Chlorinated Other Solvents

Residual

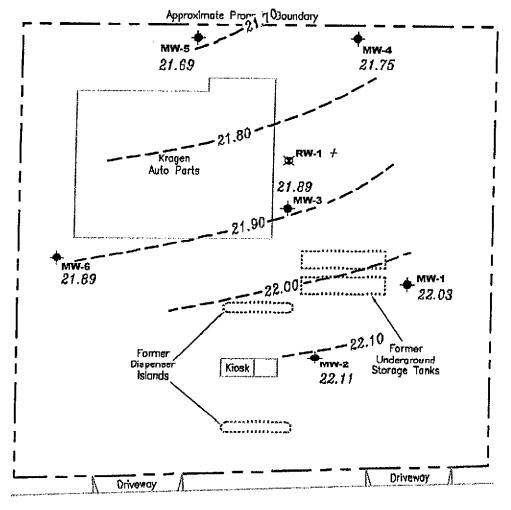
Date	Location	TPH-g	TPH-d	Benzene	Toluene	Ethylbenz	Xylene	MTBE	/E/SITE BO	Other	DTW
Jan-99	MW-1	51	NA	ND	ND	ND	ND	4.8	NA NA	NA	13.68
Jul-01	MW-1	ND	NA	ND	ND	ND	ND	ND	NA	NA	14.36
Jan-99	MW-2	ND	NA	ND	ND	ND	ND	9.8	NA	NA	14.26
Jul-01	MW-2	ND	NA	ND	ND	ND	ND	ND	NA	NA	14.96
Jan-99	MW-3	23,000	NA	ND	ND	4,100	460	920	NA	NA	14.17
Jan-01	MW-3	13,000	NA	ND	ND	1,600	63	ND	NA	NA	14.90
Jan-99	MW-4	ND	NA	מא	ND	ND	ND	23	NA	NA	12.95
Jul-01	MW-4	ND	NA	ND	ND	ND	ND	6.0	NA	NA	13.69
Jan-99	MW-5	ND	NA	1.0	ND	ND	ND	170	NA	NA	14.41
Jul-01	MW-5	ND	NA	ND	ND	ND	ND	190	NA	NA	15.12
Jan-99	MW-6	ND	NA	ND	ND	ND	ND	ND	NA	NA	14.60
Jul-01	MW-6	ND	NA	ND	ND	ND	ND	ND	NA	NA	15.24
Jan-99	RW-1	ND	NA	3.0	ND	ND	ND	1,200	NA	NA	14.05
Jul-01	RW-1	ND	NA	ND	ND	ND	ND	1,900	NA	NA	14.72

IV. LIST TECHNICAL REPORTS, CORRESPONDENCE ETC. IN CHRONOLOGICAL ORDER

TITLE/SUBJECT	DATE
Gettler-Ryan Inc., Groundwater Monitoring and Sampling Report, Second Semi-annual Event of July 31, 2001	9/7/01
GR, Limited Phase I Environmental Site Assessment at Former Tosco (76) Service Station #7004	6/8/01
GR, Underground Storage Tank and Product Piping Removal Report	9/8/00
Kaprealian Engineering, Inc., Preliminary Ground Water Investigation at Unocal Service Station #7004	5/31/91
KEI, Continuing Ground Water Investigation at Unocal Service Station #7004	8/16/91
KEI, Stockpiled Soil Sampling for Unocal Service Station #7004	1/9/91

V. ENCLOSE FOLLOWING FIGURES AND TABLES

1.	Site maps showing locations of existing buildings, former/current UST areas, subsurface utilities, and other pathways, groundwater flow direction, etc.
2.	Summary tables of all soil sampling results available, including any tank/excavation pit samples and confirmation samples, with sampling dates, location-identifications and depths (if applicable).
3.	Summary tables of all groundwater sampling results available, including depth to water/product measurements, with sampling dates and location-identifications.
4.	Figures showing all soil and groundwater sampling locations and monitoring well locations.
Addition	al Comments:



EXPLANATION

Groundwater monitoring well

Aquifer testing well

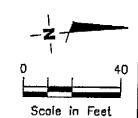
99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)

Groundwater elevation contaur, dashed where inferred.

+ TOC not available



Approximate groundwater flow direction at a gradient of 0.002 to 0.004 Ft./Ft.



HESPERIAN BOULEVARD

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



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POTENTIONETRIC MAP

Former Tosco (Unocal) Service Station #7004 15599 Hesperian Boulevard San Leandro, California

REVISED DATE

DATE

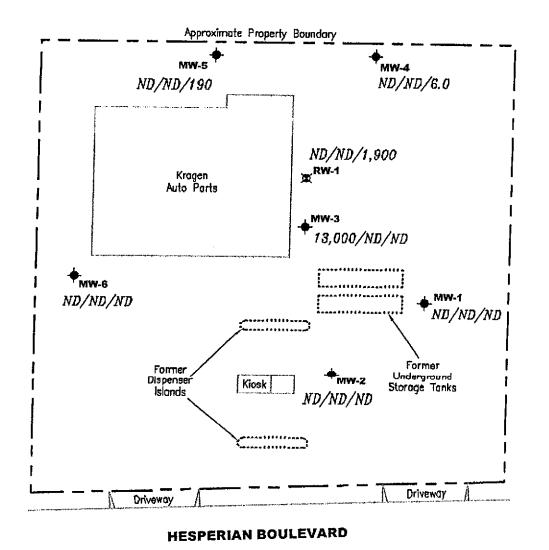
July 31, 2001

FIGURE

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PROJECT NUMBER



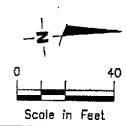
EXPLANATION

Groundwater monitoring well

× Aquifer testing well

A/B/CTPH(C) (Total Petroleum Hydrocarbons as Gasoline)/ Benzene/MTBE concentrations in ppb

ND Not Detected



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



CONCENTRATION MAP

Former Tosco (Unocal) Service Station #7004 15599 Hesperian Baulevard San Leandro, California

DATE

July 31, 2001

PROJECT NUMBER 180106

FLE NAME P:\EMMRD\TOSCO\7004\001-7004.DWG | Layout Tab: Con3

REVIEWED BY

REVISED DATE

FIGURE

Table 1 Groundwater Monitoring Data and Analytical Results

(Contract of the Contract of t		1			San Leandro, Cali	iornia																									
WELL ID/	DATE	DTW	S.I.	GWE	TPH-G	B	Ť	E	X	MTBE																					
TOC*		(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)																					
	05/04/04																														
MW-1	05/04/91		10.0-25.0		ND	ND	ND	ND	ND																						
	07/23/91				ND	ND	ND	ND	ND	~-																					
	10/14/91			4	ND	ND	ND	ND	ND																						
	01/14/92				ND	ND	ND	ND	ND																						
	04/14/92				76 ¹	ND	ND	ND	ND																						
	07/09/92				70¹	ND	ND	ND	ND	130																					
	10/28/92				SAMPLED SEMI	-ANNUALLY																									
	01/21/93				ND	ND	ND	ND	ND	42																					
6.89	04/20/93	14.89		22.00		- Annal	**			56																					
	07/22/93	14.34		22.55	ND	ND	ND	ND	ND	77																					
5.39	10/06/93	14.87		21.52			***																								
	01/11/94	15.14		21.25	ND	ND	ND	ND	ND																						
	04/06/94	14.19		22.20																											
	07/08/94	14.66		21.73	ND	ND	ND	ND	ND																						
	10/06/94	16.71		19.68																											
	01/05/95	14.68		21.71	ND	ND	ND	ND	ND																						
	04/05/95	11.76																								24.63		***	in to		
	07/14/95	12.93		23.46	ND	0.65	2.2	ND	2.3	***																					
	10/12/95	14.29		22.10		Str. als																									
	01/08/96	14.18		22.21	ND	ND	ND	ND	ND																						
	07/08/96	12.74		23.65	ND	ND	ND	ND	ND	ND																					
	01/03/97	12.89		23.50	87¹	ND	ND	ND	ND	ND																					
	07/02/97	13.66		22.73	ND	ND	ND	ND	ND	ND																					
	01/15/98	13.08		23.31	ND	ND	ND	ND	ND	ND																					
	07/08/98	11.25		25.14	ND	ND	ND	ND	ND	ND																					
	01/11/99	13.68		22.71	51°	ND	ND	ND	ND																						
	07/07/99	12.15		24.24	ND	ND	ND	ND		4.8																					
	01/04/00	13.95		22,44	ND	ND	ND	ND	ND	ND																					
	07/15/00	13.46		22.93	ND	ND	0.86		ND	ND																					
	01/19/01	12.96		23.43	ND	ND ND		ND	ND	ND																					
	07/31/01	14.36		22.03			ND	ND	ND	ND																					
	OTIVATOL	XTIOV		44.03	ND	ND	ND	ND	ND	ND																					

Table 1 Groundwater Monitoring Data and Analytical Results Former Tosco (Unocal) Service Station #7004

WELL ID/	DATE	DTW	S.L	GWE	TPH-G	В		E	X	MIBE
TOC*		(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
MW-2	05/04/91		10.0-25.0		ND	ND	ND	ND	ND	
	07/23/91				ND	ND	ND	ND ND	ND	
	10/14/91				ND	ND	ND	ND	ND ND	
	01/14/92				ND	ND	ND	ND	ND	
	04/14/92	P-16			45 ¹	ND	ND	ND	ND	
	07/09/92				ND	ND	ND	ND	ND	 49
	10/28/92				SAMPLED SEMI-					
	01/21/93				ND	ND	ND	ND	ND	 17
7.35	04/20/93	15.20		22.15			7=			80
	07/22/93	14.75		22.60	62 ¹	ND	ND	ND	ND	42
7.07	10/06/93	15.49		21.58			A.			
	01/11/94	15.77		21.30	120¹	ND	ND	ND	ND	
	04/06/94	14.83		22.24						
	07/08/94	15.28		21.79	140^{1}	ND	ND	ND	ND	
	10/06/94	16.32		20.75						
	01/05/95	15.30		21.77	310 ¹	ND	ND	ND	ND	
	04/05/95	12.12		24.95	<u></u>					ww
	07/14/95	13.55		23.52	86 ¹	ND	ND	ND	ND	
	10/12/95	14.88		22.19						
	01/08/96	14.81		22.26	91 ¹	ND	ND	ND	ND	
	07/08/96	13.37		23.70	100 ¹	ND	ND	ND	ND	ND
	01/03/97	13.14		23.93	160 ^t	ND	ND	ND	ND	ND
	07/02/97	14.26		22.81	91 ¹	ND	ND	ND	ND	ND
	01/15/98	13.31		23.76	ND	ND	ND	ND	ND	ND
	07/08/98	11.57		25.50	ND	ND	ND	ND	ND	ND
	01/11/99	14.26		22.81	ND	ND	ND	ND	ND	9.8
	07/07/99	12.24		24.83	ND	ND	ND	ND	ND	9.4
	01/04/00	14.14		22.93	ND	ND	0.518	ND	ND	9.07
	07/15/00	13.75		23.32	ND	ND	0.51	ND	ND	6.0
	01/19/01	13.37		23.70	ND	ND	ND	ND	ND	6.84
	07/31/01	14.96		22.11	ND	ND	ND	ND	ND	ND

Table 1 Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	S.L	GWE	TPH-G	В	**************************************	Ē	\mathbf{x}	MTBE
TOC*		(ft)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	(ppb)	(dqq)	(ppb)
AW-3	05/04/91		10.0.05.0		2.4.2.2				·	
71 11 -U			10.0-25.0		34,000	6,100	32	1,200	6,100	**
	07/23/91				17,000	5,500	26	1,800	2,800	
	10/14/91			Pr0	25,000	6,300	78	2,000	1,400	
	01/14/92			~~	13,000	6,600	19	2,600	1,800	le
	04/14/92				16,000	3,400	19	1,400	1,300	
	07/09/92	~~			13,000	3,200	12	1,900	1,100	
	10/28/92				15,000	4,400	15	2,400	800	
	01/21/93				12,000	2,800	11	1,600	590	
7.22	04/20/93	15.13		22.09	18,000	3,700	11	2,300	1,300	410
	07/22/93	13.52		23.70	16,000	4,500	17	3,600	1,900	440
5.79	10/06/93	15.41		21.38	24,000	4,100	ND	3,600	2,000	ND
	01/11/94	15.66		21.13	19,000	3,300	31	3,300	890	-
	04/06/94	14.72		22.07	24,000	3,100	ND	3,300	820	
	07/08/94	15.20		21.59	18,000	2,200	25	2,500	860	P-10
	10/06/94	16.23		20.56	20,000	2,100	26	3,000	900	
	01/05/95	15.12		21.67	20,000	2,100	ND	3,200	3,800	
	04/05/95	12.03		24.76	18,000	2,100	ND	3,700	690	
	07/14/95	13.46		23.33	21,000	1,600	ND	3,900	1,500	
	10/12/95	14.81		21.98	17,000	1,000	ND	3,600	1,000	3
	01/08/96	14.70		22.09	14,000	760	ND	3,100	380	<u></u> 4
	07/08/96	13.29		23.50	16,000	470	45	4,400	1,000	340
	01/03/97	13.09		23.70	14,000	160	ND	2,100	120	620
	07/02/97	13.96		22.83	23,000	110	ND	3,600	1,600	1,200
	01/15/98	13.26		23.53	12,000	33	ND ⁵	2,800	120	1,100
	07/08/98	11.64		25.15	20,000	76	ND ⁵	4,100	1,400	750
	01/11/99	14.17		22.62	23,000 ^{to}	ND ⁵	ND ⁵	4,100	460	920
	07/07/99	13.18		23.61	15,000 ¹¹	35	ND ⁵	3,400	470	1,700
	01/04/00	14.27		22.52	15,500	ND^5	ND ⁵	3,330	191	827
	07/15/00	13.91		22.88	15,000 ¹²	ND ⁵	ND ⁵	3,400	420	3,300
	08/25/00	14.24		22.55				5,400		1,920 ¹³
	01/19/01	13.42		23.37	11,10014	38.4	ND ⁵	1,760	38.8	1,920 ND ⁵
	07/31/01	14.90		21.89	13,000 ¹⁴	ND ⁵	ND ⁵	1,600	30.0 63	ND ⁵

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/	DATE	DTW	S.I.	GWE	TPH-G	B. C.	ne transfer	E	X	enter la
TOC*		(ft.)	(ft. bgs)	(msl)	(ppb)	(tgq)	(bgb)	(ppb)	(ppb)	MTBE
							N. P.	strong and property	(ppo)	(ppb)
MW-4	07/23/91		10.0-26.0		ND	ND	ND	ND	ND	
	10/14/91				ND	ND	ND	ND	ND	
	01/14/92				ND	ND	ND	ND	ND	
	04/14/92				ND	ND	ND	ND	ND	
	07/09/92				ND	ND	ND	ND	ND	
	10/28/92			*-	SAMPLED SEMI-					
	01/21/93				ND	ND	ND	ND	ND	==
5.81	04/20/93	13.84		21.97				**		 65
	07/22/93	13.52		22.29	ND	ND	ND	ND	ND	54
5.44	10/06/93	14.17		21.27					ND	
	01/11/94	14.42		21.02	ND	ND	ND	ND	ND	
	04/06/94	13.44		22.00				77	1417	
	07/08/94	13.96		21.48	ND	ND	ND	ND	ND	-
	10/06/94	15.00		20.44						
	01/05/95	13.83		21.61	ND	ND	ND	ND	ND	
	04/05/95	11.05		24.39						
	07/14/95	12.23		23.21	ND	ND	ND	ND	ND	
	10/12/95	13.59		21.85						
	01/08/96	13.43		22.01	ND	ND	ND	ND	ND	4
	07/08/96	12.04		23.40	ND	ND	ND	ND	ND	ND
	01/03/97	12.38		23.06	80¹	ND	ND	ND	ND	ND
	07/02/97	13.00		22.44	ND	ND	ND	ND	ND	25
	01/15/98	12.50		22.94	ND	ND	ND	ND	ND	ND
	07/08/98	10.53		24.91	ND	ND	ND	ND	ND	25
	01/11/99	12.95		22.49	ND	ND	ND	ND	ND	23
	07/07/99	11.76		23.68	ND	ND	ND	ND	ND	15
	01/04/00	13.17		22.27	ND	ND	ND	ND	ND	13.2
	07/15/00	13.04		22.40	ND	ND	ND	ND	ND	11
	01/19/01	12.65		22.79	ND	ND	ND	ND	ND	9.97
	07/31/01	13.69		21.75	ND	ND	ND	ND	ND	6.0

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco (Unocal) Service Station #7004

15599 Hesperian Boulevard San Leandro, California

WELL ID/	DATE	DTW	SJ.	GWE	TPH-G	B	<u> </u>			
TOC*		``````````````````````````````````````	t. bgs)	(msl)	(ppb)		T	E	X	MTBE
				(!!!\dig\	The state of the s	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
AW-5	07/23/91	10	.0-26.0		260	1.2	0.39	10	0.71	
	10/14/91			##	140	0.72	ND	1.3	0.71	
	01/14/92				60 ¹	ND	ND	ND	0.89 ND	
	04/14/92				86 ¹	ND	ND	ND	ND	
	07/09/92				ND	ND	ND	ND	ND	71
	10/28/92				ND	ND	ND	ND	ND	71 45
	01/21/93				100 ¹	ND	ND	ND	ND	43 160
.01	04/20/93	14.87		22.14	99 ¹	ND	ND	ND	ND	120
	07/22/93	14.82		22.19	59 ²	ND	ND	2.6	ND	42
.81	10/06/93	15.61		21.20	150	1.1	ND	3.1	0.85	42 57
	01/11/94	15.84		20.97	160	ND	0.79	0.54	ND	
	04/06/94	14.90		21.91	260	1.4	ND	0.88	ND	
	07/08/94	15.38		21.43	200	ND	ND	ND	ND	
	10/06/94	16.42		20.39	350	1.3	ND	ND	ND	
	01/05/95	15.20		21.61	85	ND	ND	ND	ND	
	04/05/95	11.72		25.09	ND	ND	ND	ND	ND	
	07/14/95	13.69		23.12	180	1.3	ND	7.9	ND	
	10/12/95	15.02		21.79	310	ND	ND	31	1.2	3
	01/08/96	14.85		21.96	ND	0.55	ND	ND	0.58	4
	07/08/96	13.52		23.29	140	2.1	1.4	5.6	0.51	110
•	07/12/96	14.50		22.31	· 					
	01/03/97	12.85		23.96	12,000	150	ND	2,100	120	660
	07/02/97	13.79		23.02	ND	ND	ND	ND	ND	72
	01/15/98	13.03		23.78	69 ⁶	ND	ND	ND	ND	7
	07/08/98	12.05		24.76	ND	0.74	ND	ND	ND	95
**	01/11/99	14.41		22.40	ND	1.0	ND	ND	ND	170
	07/07/99	12.38		24.43	130	0.64	ND	ND	ND	330
	01/04/00	14.33		22.48	ND	ND	ND	ND	ND	183
	07/15/00	13.88		22.93	ND	0.68	ND	ND	ND	350
	01/19/01	13.41	;	23.40	ND	ND	ND	ND	ND	195
	07/31/01	15.12		21.69	ND	ND .	ND	ND	ND ND	190

Table 1
Groundwater Monitoring Data and Analytical Results

WELL ID/ ···	DATE	DTW	SL	GWE	TPH-G	В	\mathbf{r}	$\hat{\mathbf{k}}$		totophyle <u>en en en en en e</u>
TOC*		(ft.)	(ft. bgs)	(msl)	(ppb)	(ppb)	(ppb)	E (ppb)	X	MTBE
						CARL CARREST	APROL.	(ppo)	(ppb)	(ppb)
MW-6	07/23/91	***	10.0-26.0		ND	ND	ND	ND	ND	
	10/14/91				ND	ND	ND	ND	ND ND	~ u
	01/14/92				ND	ND	ND	ND	ND	
	04/14/92				ND	ND	ND	ND	ND	
	07/09/92				ND	ND	ND	ND	ND	
	10/28/92			**	SAMPLED SEMI		1112	11D		
	01/21/93				ND	ND	ND	ND	ND	
7.55	04/20/93	15.27		22.28						
	07/22/93	15,20		22.35	ND	ND	ND	ND	AID.	ND
7.13	10/06/93	15.75		21.38		112		IND	ND	ND
	01/11/94	16.02		21.11	ND	ND	ND	ND	ND	
	04/06/94	15.07		22.06	<u></u>		140	140		* *
	07/08/94	15.55		21.58	ND	ND	ND	ND	ND	
	10/06/94	16.58		20.55	•-					
	01/05/95	15.42		21.71	ND	ND	ND	ND	ND	
	04/05/95	12.14		24.99					ND 	
	07/14/95	13.87		23.26	ND	ND	ND	ND	ND	
	10/12/95	15.17		21.96		~~				
	01/08/96	15.05		22.08	ND	ND	ND	ND	ND	
	07/08/96	13.71		23.42	ND	ND	ND	ND	ND	ND
	01/03/97	13.12		24.01	97 [†]	· ND	ND	ND	ND	ND
	07/02/97	14.57		22.56	ND	ND	ND	ND	ND	ND
	01/15/98	13.30		23.83	ND	ND	ND	ND	ND	ND
	07/08/98	12.33		24.80	ND	ND	ND	ND	ND	ND
	01/11/99	14.60		22.53	ND	ND	ND	ND	ND	ND
	07/07/99	13.23		23.90	ND	ND	ND	ND	ND	ND
	01/04/00	14.41		22.72	ND	ND	ND	ND	ND	ND ND
	07/15/00	14.05		23.08	ND	ND	ND	ND	ND	
	01/19/01	13.58		23.55	ND	ND	ND	ND ND	ND ND	ND
	07/31/01	15.24		21.89	ND	ND	ND ND	ND ND	ND ND	ND ND

Table 1
Groundwater Monitoring Data and Analytical Results
Former Tosco (Unocal) Service Station #7004

WELL ID/ FOC*	DATE	DTW (ft.)	S.I. (fi. bgs)	GWE (msl)	TPH-G (ppb)	B	T	E	X	МТВ
		23.11.10.19.11.11	977 897		zaran Magani da karan da kara Baran da karan da ka	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
RW-1	07/08/98	11.72	12.5-27.5		80 ⁸	1.7	ND	ND	ND	1,300
	01/11/99	14.05			ND ⁵	3.0	ND ⁵	ND ⁵	ND ⁵	1,200
	07/07/99	13.05			ND	ND	ND	ND	ND	590
	01/04/00	1 4.2 6			ND	ND	ND	ND	ND	270
	07/15/00	13.77			ND	0.55	ND	ND	ND	460
	01/19/01	13.29			ND	ND	NĐ	ND	ND	338
	07/31/01	14.72			ND ⁵	ND ⁵	ND ⁵	ND ⁵	ND ⁵	1,900
rip Blank										
B-LB	01/15/98				ND .	ND	ND	ND	ND	ND
	07/08/98				ND	ND	ND	ND	ND	ND
	01/11/99				ND	ND	ND	ND	ND	ND
	07/07/99				ND	ND	ND	ND	ND	ND
	01/04/00				ND	ND	ND	ND	ND	ND
	07/15/00				ND	ND	ND	ND	ND	ND ND
	01/19/01				ND	ND	ND	ND	ND	ND
	07/31/01	••			ND	ND	ND	ND	ND	ND

Table 1

Groundwater Monitoring Data and Analytical Results

Former Tosco (Unocal) Service Station #7004 15599 Hesperian Boulevard San Leandro, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 15, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing

TPH-G = Total Petroleum Hydrocarbons as Gasoline

(ppb) = Parts per billion

DTW = Depth to Water

B = Benzene

ND = Not Detected

(ft.) = Feet

T = Toluene

-- = Not Measured/Not Analyzed/Not Available

S.I. = Screen Interval

E = Ethylbenzene

(ft. bgs) = Feet Below Ground Surface

X = Xylenes

GWE = Groundwater Elevation

MTBE = Methyl tertiary butyl ether

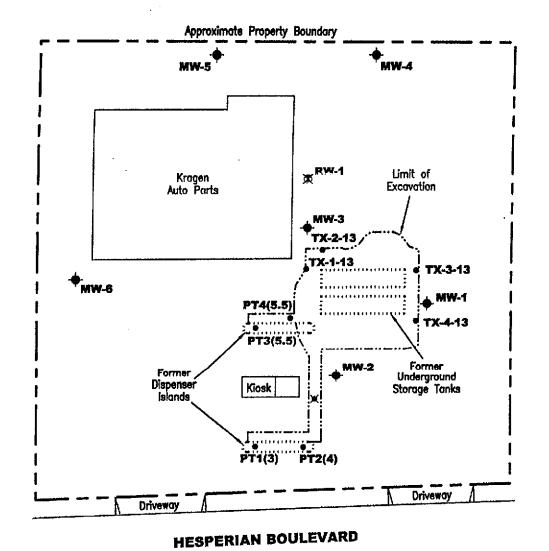
(msl) = Mean sea level

- * TOC elevations are relative to mean sea level (msl), based on the City of San Leandro Benchmark (Elevation = 36.04 feet msl). Prior to October 6, 1993, the DTW measurements were taken from the top of well covers.
- ORC installed.
- ♦♦ ORC removed from well.
- 1 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
- Laboratory report indicates the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
- 4 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
- ⁵ Detection limit raised. Refer to analytical reports.
- 6 Laboratory report indicates unidentified hydrocarbons C6-C8.
- Laboratory narrative: MTBE was not reported due to the presence of a chlorinated hydrocarbon pattern.
- 8 Laboratory report indicates discrete peaks and unidentified hydrocarbons <C7.</p>
- Laboratory report indicates discrete peaks.
- Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
- 11 Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
- Laboratory report indicates gasoline C6-C12.
- 13 MTBE by EPA Method 8260.
- Laboratory report indicates weathered gasoline C6-C12.

Table 1 - Chemical Analytical Data

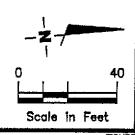
Former Tosco 76 Branded Facility No.7004 15599 Hesperian Blvd San Leandro, California

Sample ID	Date Collected	Sample Depth	TPHg	Benzene	Toluene	Ethyl- Benzene	Xylenes	MTBE
		(feet)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
GASOLINE UST	PIT (SOIL)	•						
TX-1-13	5/26/00	13.0	ND	ND	ND	ND	ND	ND
TX-2-13	5/26/00	13.0	1.1	ND	ND	0.014	0.015	ND
TX-3-13	5/26/00	13.0	350	ND	ND	4.8	0.81	ND
TX-4-13	5/26/00	13.0	4.1	ND	ND	0.016	0.013	ND
PRODUCT LINE	ES (SOIL)							
PT1 (3)	5/24/00	3.0	ND	ND	ND	ND	ND	ND
PT2 (4)	5/24/00	4.0	ND	ND	ND	ND	ND	ND
PT3 (4.5)	5/24/00	4.5	ND	ND	ND	ND	ND	ND
PT4 (5.5)	5/24/00	5.5	ND	ND	ND	ND	ND	ND
GASOLINE TAI	NK PIT STOC	KPILE						
Comp S1	5/24/00	NA	ND	ND	ND	ND	ND	ND
Comp S2	5/24/00	NA	ND	ND	ND	ND	ND	ND



EXPLANATION

- Groundwater monitoring well
- Aquifer testing well
- Soil sample location
- ★ Sample attempted pea gravel too deep to reach native soil





Gettler - Ryan Inc.

REVIEWED BY

6747 Sterra Ct., Suite J Dublin, CA 94568

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

(925) 551-7555

SITE PLAN

Former Tosco (76) Service Station No. 7004 15599 Hesperian Boulevard

San Leandro, California

DATE 8/00

REVISED DATE

PROJECT NUMBER
140106

FILE NAME: P:\ENVIRO\TOSCO\7004\A00-7004.DWG | Layout Tab: Tank Rpt 8-00

FIGURE 9

KEI-P90-1003.R5 August 16, 1991

TABLE 3
SUMMARY OF LABORATORY ANALYSES
SOIL

<u>Date</u> 7/02/91	Sample Number	Depth (feet)	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	Xylenes	Ethyl- <u>benzene</u>	
7/02/91	MW4 (5) MW4 (10) MW4 (15) MW4 (17)	5.0 10.0 15.0 17.0	ND ND ND	ND ND ND	0.0084 0.0051 0.016 0.015	ND ND 0.017 0.015	ND ND ND	
	MW5(5) MW5(10) MW5(15) MW5(17.5)	5.0 10.0 15.0 17.5	ND ND ND ND	ND ND ND ND	0.030 0.0074 0.011 0.0098	ND 0.012 0.0094 0.0077	ND ND ND 0.0052	
	MW6(5) MW6(10) MW6(15) MW6(17.5)	5.0 10.0 15.0 17.5	ND ND ND	ND ND ND ND	0.0086 0.0061 ND 0.0084	ND ND ND 0.0063	ND ND ND	
Detecti Limits	ion		1.0	0.0050	0.0050	0.0050	0.0050	

ND = Non-detectable.

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

KEI-P90-1003.R5 August 16, 1991

TABLE 4
SUMMARY OF LABORATORY ANALYSES
SOIL

<u>Date</u>	Sample <u>Number</u>	Depth (feet)	TPH as <u>Gasoline</u>	Benzene	<u>Toluene</u>	<u>Xylenes</u>	Ethyl- <u>benzene</u>
4/22/91	MW1(5) MW1(10) MW1(16)	5.0 10.0 16.0	ND ND 1.5	ND ND ND	ND ND ND	0.012 ND ND	ND ND
	MW2(5) MW2(10) MW2(15.5) MW2(17)	5.0 10.0 15.5 17.0	4.5 6.8 ND ND	0.015 0.025 ND 0.014	ND ND ND ND	0.079 0.043 ND ND	0.034 0.035 ND ND
	MW3 (5) MW3 (10) MW3 (15) MW3 (17.5)	5.0 10.0 15.0 17.5	2.0 ND 4,800 1,000	0.025 0.018 23 8.4	ND ND 9.1 4.6	0.011 ND 290 64	ND ND 63 17
Detecti Limits	ion		1.0	0.0050	0.0050	0.0050	0.0050

ND = Non-detectable.

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

TABLE 5
SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on October 12, 19, 22 & 31, and November 2, 1990)

<u>Sample</u> A1	Depth (feet)	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	Ethylbenzene
A1 A2 A3 B1 B2 B3 C1 C2 C3 SW1 SW2 SW3 SW4 SW5 SW5(20)	14.5 14.5 14.0 15.0 15.0 15.0 15.0 18.0 18.0 18.0 18.0	350 480 570 180 1,900 990 270 1,200 590 3.7 4.5 4.1 ND 998 30	2.0 2.4 0.97 0.64 9.7 6.3 0.64 4.9 4.6 0.21 0.46 0.024 0.0090 0.58 0.054	3.6 7.3 5.6 0.84 120 52 3.7 41 23 0.024 0.024 0.0080 ND ND 0.047	47 49 50 11 250 120 22 150 80 0.42 0.46 0.088 0.0070 21	7.7 7.4 8.3 3.0 33 16 5.4 24 9.4 0.14 0.26 0.058 ND
P1 P1(8) P2 P2(7.5) P3 P3(5.5) P4	2.5 8.0 3.0 7.5 2.5 5.5 2.5	1,400 5.7 3,900 20 100 9.8	0.22 0.0078 1.1 ND 0.057 0.015	3.3 0.0054 23 0.11 0.63 0.15 0.10	0.054 72 0.18 280 1.3 12 1.3 0.13	0.46 8.9 0.033 41 0.12 0.97 0.13
Limits		1.0	0.0050	0.0050	0.0050	0.0050

ND = Non-detectable.

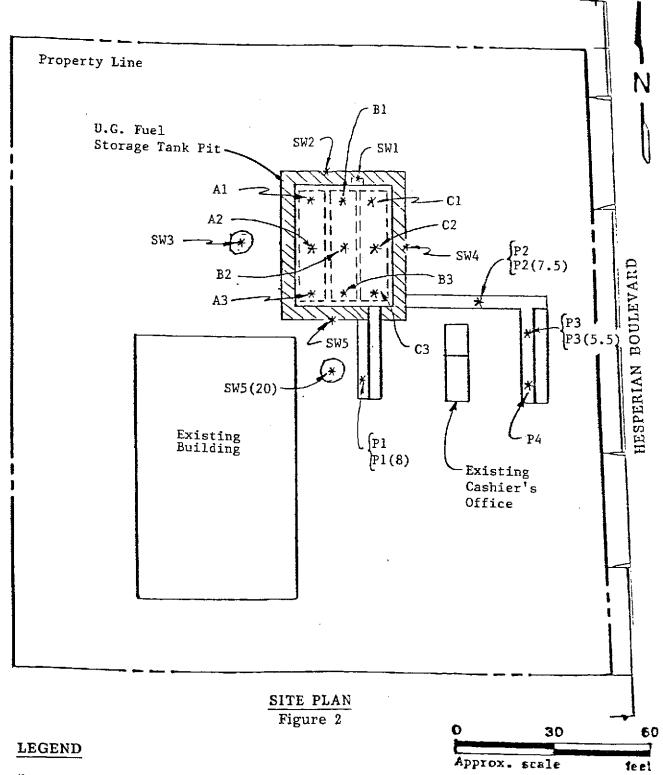
Results in parts per million (ppm), unless otherwise indicated.



KAPREALIAN ENGINEERING, INC.

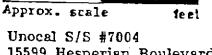
Consulting Engineers

P.O. BOX 996 • BENICIA, CA 94510 (707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



st Sample Point Location

Area of Additional Excavation



15599 Hesperian Boulevard San Leandro, CA