

ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY  
DAVID J. KEARS, Agency Director

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

October 12, 2006

Mr. Dana Thurman  
Chevron  
6001 Bollinger Canyon Rd., K2236  
P.O. Box 6012  
San Ramon, CA 94583

Joan and Kirk Beales Trs  
24 North Terrace  
Tiburon, CA 94920-2019

Dear Mr. Thurman and Joan and Kirk Beales Trs:

Subject: Fuel Leak Site Case Closure, Chevron #9-0338, 5500 Telegraph Ave., Oakland, CA 94609; Case No. RO0000221.

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 Health (ACEH) 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 1.3 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg), 2000 ppm TPH as diesel, 2800 ppm TPH as hydraulic oil, 2600 ppm oil and grease, 0.017, 0.0058, 0.044, 0.067, 0.74 ppm, benzene, toluene, ethyl benzene, xylenes and MTBE, respectively and 29.1, 6.8, 23, 47 ppm chromium, lead and zinc, respectively, remain in soil at this site.
- Up to 240 parts per billion (ppb) TPHg and 13,1,13,14 ppb, benzene, toluene, ethyl benzene, xylenes, respectively, 710, 5, 38 ppb methyl tertiary butyl ether (MTBE), TAME, TBA, respectively, and 80.5, 16.7, 126, 143 ppb, chromium, lead, nickel and zinc, respectively remain in groundwater at this site.

If you have any questions, please call Barney Chan at (510) 567-6765. Thank you.

Sincerely,

Donna L. Drogos, P.E.  
LOP and Toxics Program Manager

Enclosures:

1. Remedial Action Completion Certificate
2. Case Closure Summary

cc:

Mr. Leroy Griffin (w/enc)  
Oakland Fire Department  
250 Frank Ogawa Plaza, Suite 3341  
Oakland, CA 94612

Mr. Toru Okamoto (w/enc)  
State Water Resources Control Board  
UST Cleanup Fund  
P.O. Box 944212  
Sacramento, CA 94244-2120

✓

(B. Chan) (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

**CASE CLOSURE SUMMARY  
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

**I. AGENCY INFORMATION**

Date: 6/16/06

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6765
Responsible Staff Person: Barney Chan	Title: Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Chevron #9-0338		
Site Facility Address: 5500 Telegraph Avenue, Oakland, CA 94609		
RB Case No.: ---	Local Case No.: ---	LOP Case No.: RO221
URF Filing Date: ---	SWEEPS No.: ---	APN: 14-1221-10-1
Responsible Parties	Addresses	Phone Numbers
Chevron Mr. Dana Thurman	6001 Bollinger Canyon Rd., K2236 P.O. Box 6012 San Ramon, CA 94583	(925) 842-9559
Joan and Kirk Beales Trs	24 North Terrace Tiburon, CA 94920-2019	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1-3	10,000	UL gasoline	Removed	7/98
4	1000	Waste oil	Removed	7/98
Piping				

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and Type of Release: unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: ----	
Monitoring wells installed? yes	Number: 4	Proper screened interval? yes
Highest GW Depth Below Ground Surface: 5.79' bgs	Lowest Depth: 12.04' bgs	Flow Direction: southwest
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity: No drinking water supply wells located within ½ mile of site. The nearest supply well is an irrigation well located approximately 1900' down-gradient of site. Because of limited residual source and the distance to the well, it is not likely to be impacted by this site.

Are drinking water wells affected? No	Aquifer Name: Oakland Sub basin- East Bay Plain
Is surface water affected? No	Nearest SW Name: Glen Echo Creek, ~ 1 mile south of site
Off-Site Beneficial Use Impacts (Addresses/Locations): none	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	3-10,000 gallon 1-1000 gallon	Disposed by ECI, Richmond, CA	7/22/98
Piping	Unknown amount	Disposed by ECI, Richmond, CA	7/22/98
Free Product	300 pounds	Disposed Chem Waste Mgmt, Kettleman City	9/14/98
Soil	40cy	Reused onsite	7/2/98
	700 cy	Reused at 3647 Shellmound Rd., Emeryville	7/31/98
	306 cy	Disposed at BFI Landfill, Livermore	9/98 & 8/98
Groundwater	1500 gallons	Disposed at McKittrick facility, Buttonwillow	8/7/98

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP  
(Please see Attachments for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	1.3	1.3	11,000	240
TPH (Diesel)	*2000	*2000	---	---
TPH (Hydraulic oil)	2800	2800	---	---
Oil & Grease	*2600	*2600	<320	<320
Benzene	0.017	0.017	350	13
Toluene	0.0058	0.0058	170	1
Ethylbenzene	0.044	0.044	626	13
Xylenes	0.067	0.067	1900	14
Heavy Metals: (Cd, Cr, Pb, Ni, Zn)	<0.5, 29.1, 6.8, 23, 47	<0.5, 29.1, 6.8, 23, 47	<10, 80.5, 16.7, 126, 143	<10, 80.5, 16.7, 126, 143
MTBE	**0.74	**0.74	+15,000	+710
Other (8240/8270)	ND/ND	ND/ND	ND/---	ND/---

\* Results are from samples taken from the hydraulic lift excavations and are possibly from hydraulic oil releases

\*\* MTBE results only for soil, TAME, ETBE, DIPE, TBA, EtOH, EDB and EDC not analyzed

+ 5 ppb TAME, <0.5 ppb ETBE, <0.5 ppb DIPE, 38 ppb TBA, <50 EtOH ppb, NA EDB, and NA EDC

## Site History and Description of Corrective Actions:

The site is an active service station located at the northeastern corner of Telegraph Ave. and 55<sup>th</sup> St. in Oakland. Land use in the vicinity is mixed commercial and residential. The site is bordered to the north by Highway 24, to the east by residential housing, to the west by Telegraph Ave. and to the south by 55<sup>th</sup> St. Current site facilities include a station building, car wash, six dispenser islands under a common canopy and two underground tanks located near the northern boundary. See Attachment 1 for site location and Attachment 2 for current site configuration.

This site was originally investigated after the October 5, 1988 removal of a 1000 gallon waste oil tank and the June-July 1989 removal and replacement of fuel tank pipe lines. This site was investigated and subsequently closed by our office on April 5, 1995. During this investigation, three monitoring wells were installed, C-1 through C-3. In this investigation, groundwater was initially encountered at approximately 24' bgs and equilibrated at approximately 12' bgs. Depth to groundwater varied from 7-12' bgs. Gradient was determined to be southwest. The three wells at the site were kept for future monitoring. The waste oil tank was replaced by another 1000 gallon UST to the south of the original, just east of the station building. See Attachment 3 for the first generation tank configuration and boring logs in Attachment 11.

On June 30, 1998, prior to the removal of the four USTs at the site, a groundwater sample was taken from the tank backfill observation well. This sample reported 15,000 ppb MTBE. See Attachment 4A for this sample location. Based upon this result, the site was reopened. After the removal of the three fuel USTs and the waste oil tank, two fuel tanks were installed just east of the former fuel USTs, however, the waste oil tank was not replaced. The station building was moved to the west and a car wash was installed in the northeast corner of the site. Monitoring well C-3 was decommissioned during this reconfiguration.

On July 22, 1998, the three 10k gasoline USTs were removed from a common pit. The excavation was taken down to approximately 14' bgs. Groundwater appeared at approximately 9' bgs. A total of six sidewall samples (CX-1-9 through CX-6-9) were collected. TPHg was not detected in any of the soil samples. Up to 0.74 ppm MTBE and 0.013 ppm benzene was detected in the soil samples. Because the on-site wells were sampled on June 28, 1998, the OFD waived collection of a groundwater sample. The waste oil tank also removed the same day from a separate tank pit was excavated to a depth of 9' bgs. One soil sample was collected from the bottom of the pit, CW-1-9. This soil sample detected 130 ppm oil and grease and 29.1, 18.9, 35.2 ppm, chromium, nickel and zinc, respectively. TPHg, BTEX, MTBE, TPHd, VOCs, SVOCs, lead and cadmium were all ND. Soil samples collected beneath the dispensers and the product lines were collected at depths ranging from 3.5-4' bgs. These samples were ND for TPHg, benzene, toluene, ethyl benzene and MTBE. Three hydraulic lifts and an oil-water separator were also removed from inside the former station building. Three soil samples, CT-1-9 through CT-3-9, were collected from the hydraulic lift excavations at a depth of 9' bgs. Only CT-3-9 detected TPH as hydraulic oil. This sample detected 2800 ppm TPHho, 2000 ppm TPHd, 2600 ppm oil and grease and 1.6 ppm TPHg. This sample was not over-excavated. See Attachment 4 for sample locations and Attachment 7 for Historic Soil Data.

Approximately 700 cy of soil from the excavation and the enlargement of the tank pit for the new tanks was sampled and approved for reuse by the OFD. The soil was transported to 3647 Shellmound Road, Emeryville for reuse. Approximately 252 cy of soil was generated from the excavation of soils for the carwash facility. This soil was sampled, characterized and disposed at the Vasco Rd. landfill in Livermore. Prior to removal, approximately 300 pounds of hydraulic fluid was removed and disposed from the lifts. Approximately 54 cy of soil from the excavation of the hydraulic lifts was also disposed at the Vasco Rd. landfill. Approximately 1500 gallons of groundwater was removed from the tank pit and disposed at the McKittrick Disposal facility in Buttonwillow, CA.

In May 1999 monitoring wells C-4 and C-5 were installed at the site to further investigate the release of contaminants to groundwater down-gradient of the former hydraulic lifts and the fuel USTs, respectively. Up to 1.3 ppm TPHg, 0.017, 0.12 and 0.1 ppm benzene, xylenes and MTBE were detected in soil samples from these well borings. Additionally, monitoring wells C-1 and C-2 were drilled out 1-1.5' beyond their original depth to ~31' bgs, backfilled to 20' with bentonite and then replacement wells, C-1A and C-2A were installed within the same boreholes and constructed similarly to wells C-4 and C-5. Because of this construction method, no soil samples were collected from wells C-1A and C-2A. Initial groundwater results indicated the highest MTBE and benzene concentrations immediately down-gradient of the UST pit and the highest TPHg concentrations down-gradient of the dispenser islands. These wells have been monitored for approximately six years, from 5/99 to 2/05. See Attachment 10 for historic monitoring data.

A Site Conceptual Model (SCM) was submitted in September 2001. Based upon DWR reports, the nearest supply well identified is an irrigation well approximately 1900' southwest of the site. The nearest surface water is Glen Echo Creek, approximately 1 mile south of the site. Neither is expected to be affected by the release. See Attachment 9 for the Well Search Map and Results. The site geology consists of sandy clays and silts, underlain by clayey gravels

and gravelly sandy clay to the total depth explored, 32.5'. The water bearing zone consists of clayey gravel and silty sand. Groundwater is first encountered at about 24' bgs and equilibrates from 7-12' bgs. Two source areas have been identified, the former tank pit and the dispenser islands. These release areas have been remediated by removing the old USTs, impacted soil and groundwater and replacing the old dispenser islands and piping. Vadose soils have been excavated to approximately 14' within the former tank pit and to approximately 9' in the area of the former hydraulic lifts. Monitoring wells C-5 and C-1A are located down-gradient of the UST pit and dispenser islands, respectively. See Attachment 5 for a cross-sectional diagram of the site and a rose diagram.

In August 2002 a soil and groundwater investigation was performed to investigate the utility trenches down-gradient of the site and further delineate the petroleum plume. Four hand-auger borings were advanced to depths ranging from 11.5-18' bgs adjacent to the utility trenches in Telegraph Avenue and 55<sup>th</sup> Street. Soil samples were collected from each boring from depths ranging from 11-12' bgs. All soil sample results were ND for TPHg, BTEX and MTBE. Groundwater samples were collected from these borings and analyzed for the same chemicals. The only contaminant detected was MTBE at 37 ppb in HA2-W and 4 ppb in HA3-W. It appears that although the plume has impacted the off-site utility trenches, MTBE is the only COC detected and it is found at low levels. See Attachment 6 for a cross-section extended through the hydropunch borings and Attachment 8 for grab groundwater results.

**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: site is recommended for closure for the current commercial use only. If a change in land use to residential or other conservative scenario occurs at this property, Alameda County Environmental Health must be notified and the case be re-evaluated. The site will be placed in the City of Oakland Permit Tracking System. Any subsurface work at the site requires a health and safety plan to address potential petroleum hydrocarbon impacts to soil and groundwater.		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: NA
Monitoring Wells Decommissioned: Yes	Number Decommissioned: 3	Number Retained: 4
List Enforcement Actions Taken: NA		
List Enforcement Actions Rescinded: NA		

**V. ADDITIONAL COMMENTS, DATA, ETC.**

Considerations and/or Variances:

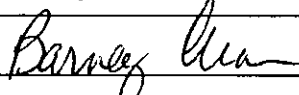
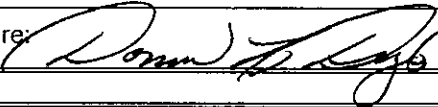
- The plume has not been completely delineated to the north and northwest directions of monitoring well C-5 and southwest of well C-1, which are cross-gradient of the source areas. However, the grab groundwater samples taken down-gradient of these wells show very low TPHg, BTEX and MTBE concentrations, which are assumed to be representative of the plume.
- Although TPHd and TPH as hydraulic oil were detected from beneath the former hydraulic lifts, these analytes were not run in the groundwater sample from the down-gradient well, C-4. The TPHd reported did not resemble the standard and was likely from the hydraulic oil release. The toxicity of hydraulic oil is low and generally does not require remediation beyond removal of saturated material.

- The lead scavengers, EDB and EDC were not analyzed in soil or groundwater samples. Only MTBE was analyzed in soil samples.
- The highest concentration of MTBE reported in groundwater, 15, 000 ppb was from a grab groundwater sample from an observation tank backfill well run by EPA Method 8020. The highest concentration of MTBE ever reported in a monitoring well sample run by EPA Method 8260 was 2500 ppb.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the current commercial land use (service station) based upon the information available in our files to date. Residual soil and groundwater contamination in vicinity of former USTs appears localized and attenuating. ACEH staff recommend closure for this site.

**VI. LOCAL AGENCY REPRESENTATIVE DATA**

Prepared by: Barney Chan	Title: Hazardous Materials Specialist
Signature: 	Date: 6-16-06
Approved by: Donna L. Brogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 07/25/06

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

**VII. REGIONAL BOARD NOTIFICATION**

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature:	Date:

**VIII. MONITORING WELL DECOMMISSIONING**

Date Requested by ACEH:	Date of Well Decommissioning Report:	
All Monitoring Wells Decommissioned: No	Number Decommissioned: 3	Number Retained: 4
Reason Wells Retained:		
Additional requirements for submittal of groundwater data from retained wells:		
ACEH Concurrence - Signature:		Date:

- The lead scavengers, EDB and EDC were not analyzed in soil or groundwater samples. Only MTBE was analyzed in soil samples.
- The highest concentration of MTBE reported in groundwater, 15,000 ppb was from a grab groundwater sample from an observation tank backfill well run by EPA Method 8020. The highest concentration of MTBE ever reported in a monitoring well sample run by EPA Method 8260 was 2500 ppb.

Conclusion:

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**VI. LOCAL AGENCY REPRESENTATIVE DATA**

Prepared by: Barney Chan	Title: Hazardous Materials Specialist
Signature: <i>Barney Chan</i>	Date: 6-16-06
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: <i>Donna L. Drogos</i>	Date: 07/25/06

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

**VII. REGIONAL BOARD NOTIFICATION**

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 8/18/06
Signature: <i>Cherie McCaulou</i>	Date: 8/22/06

**VIII. MONITORING WELL DECOMMISSIONING**

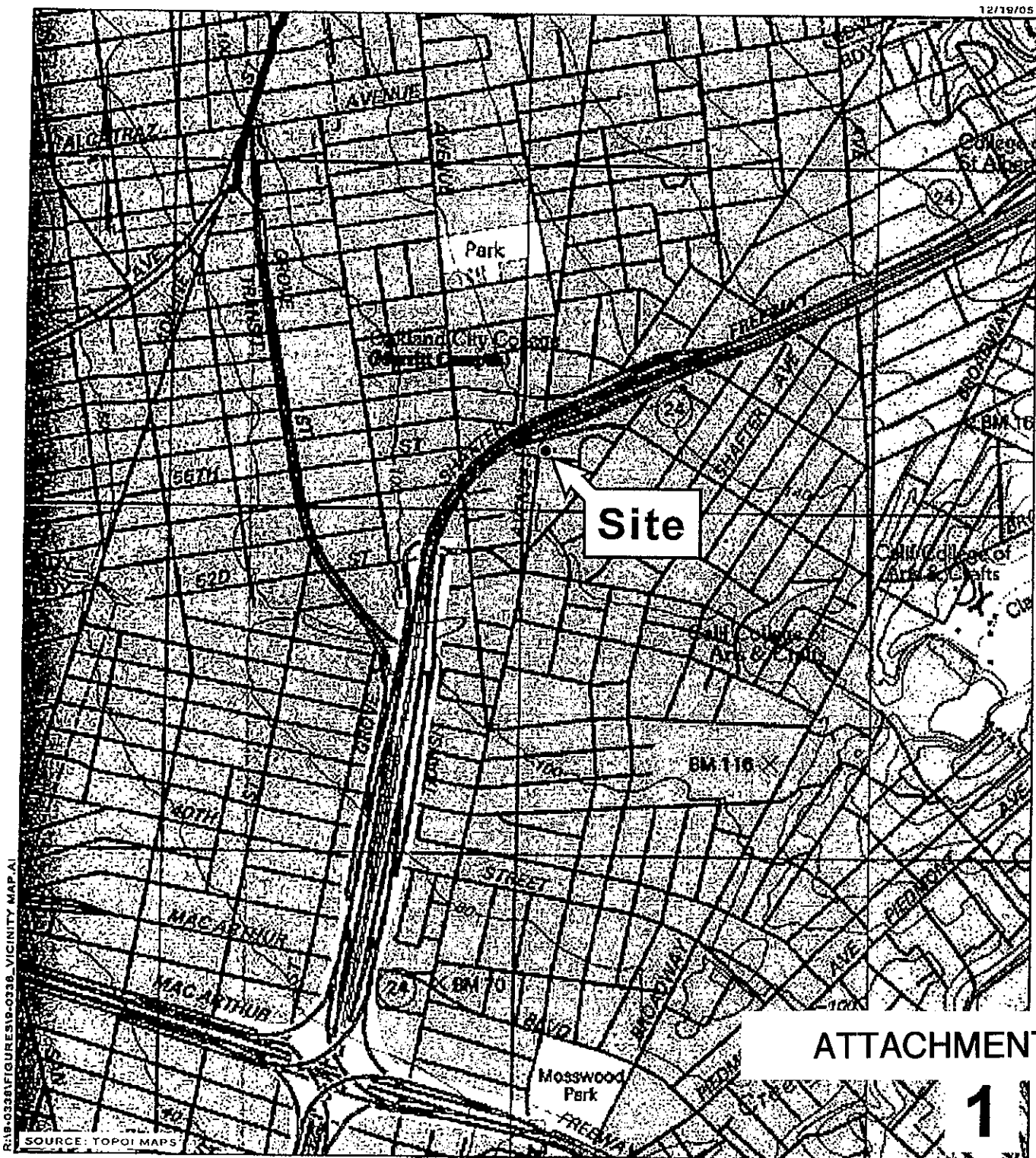
Date Requested by ACEH: 8/18/06	Date of Well Decommissioning Report: 10/10/06	
All Monitoring Wells Decommissioned: No	Number Decommissioned: 7	Number Retained: 0
Reason Wells Retained:		
Additional requirements for submittal of groundwater data from retained wells:		
ACEH Concurrence - Signature: <i>Barney Chan</i>	Date: 10/12/06	



Attachments:

1. Site Vicinity Map
2. Site Plan
3. First Generation Tank Configuration
4. Well and Sample Locations
- 4A Tank Backfill Well Location
5. Cross-sectional and a Rose Diagrams
6. Cross-sectional Diagram
7. Historical Soil Data
8. Historical Grab Groundwater Data
9. Well Search Map and Result
10. Historic Monitoring Data
11. Boring Logs

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

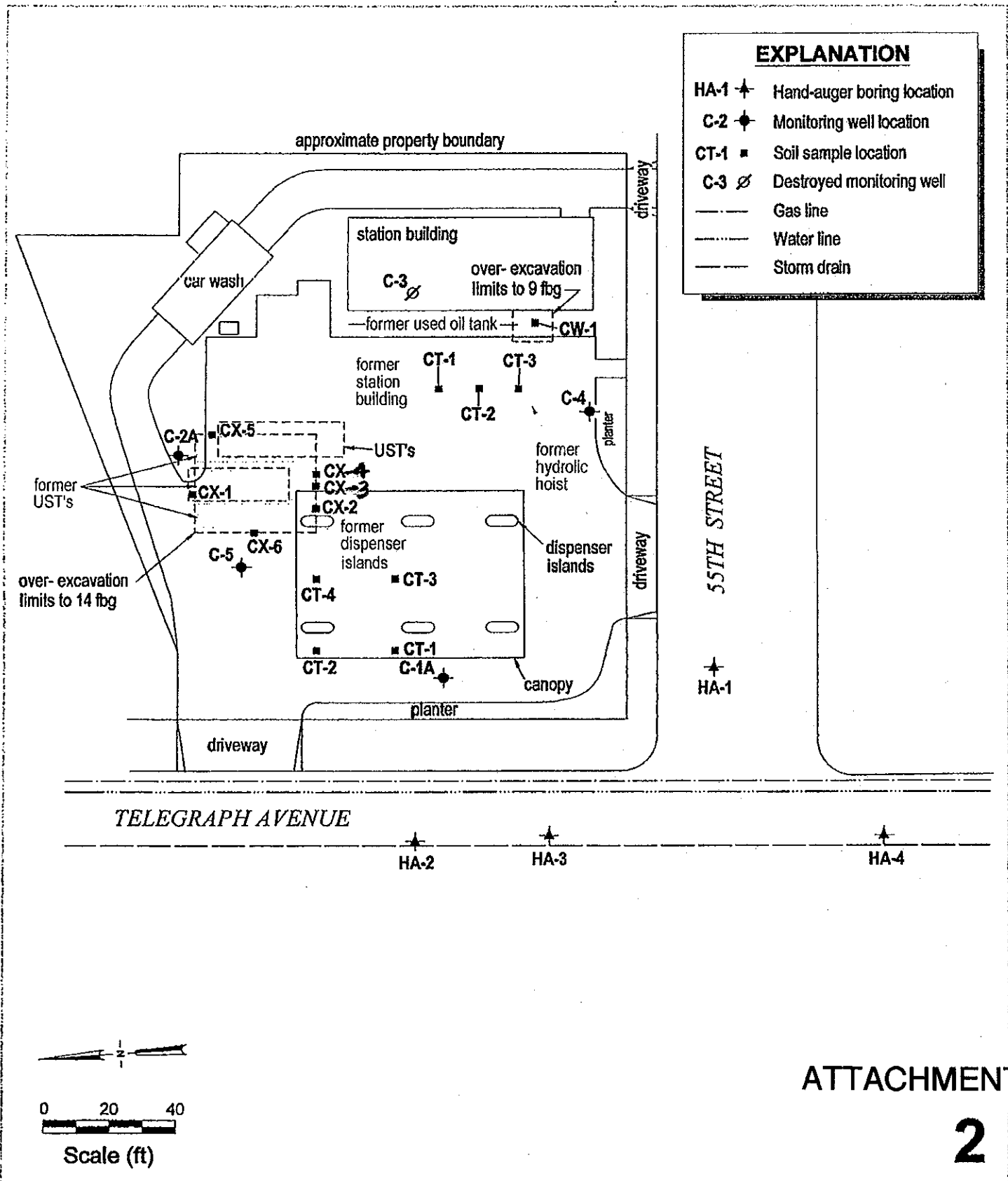


**Chevron Service Station 9-0338**  
 5500 Telegraph Avenue  
 Oakland, California



**Vicinity Map**

C A M B R I A



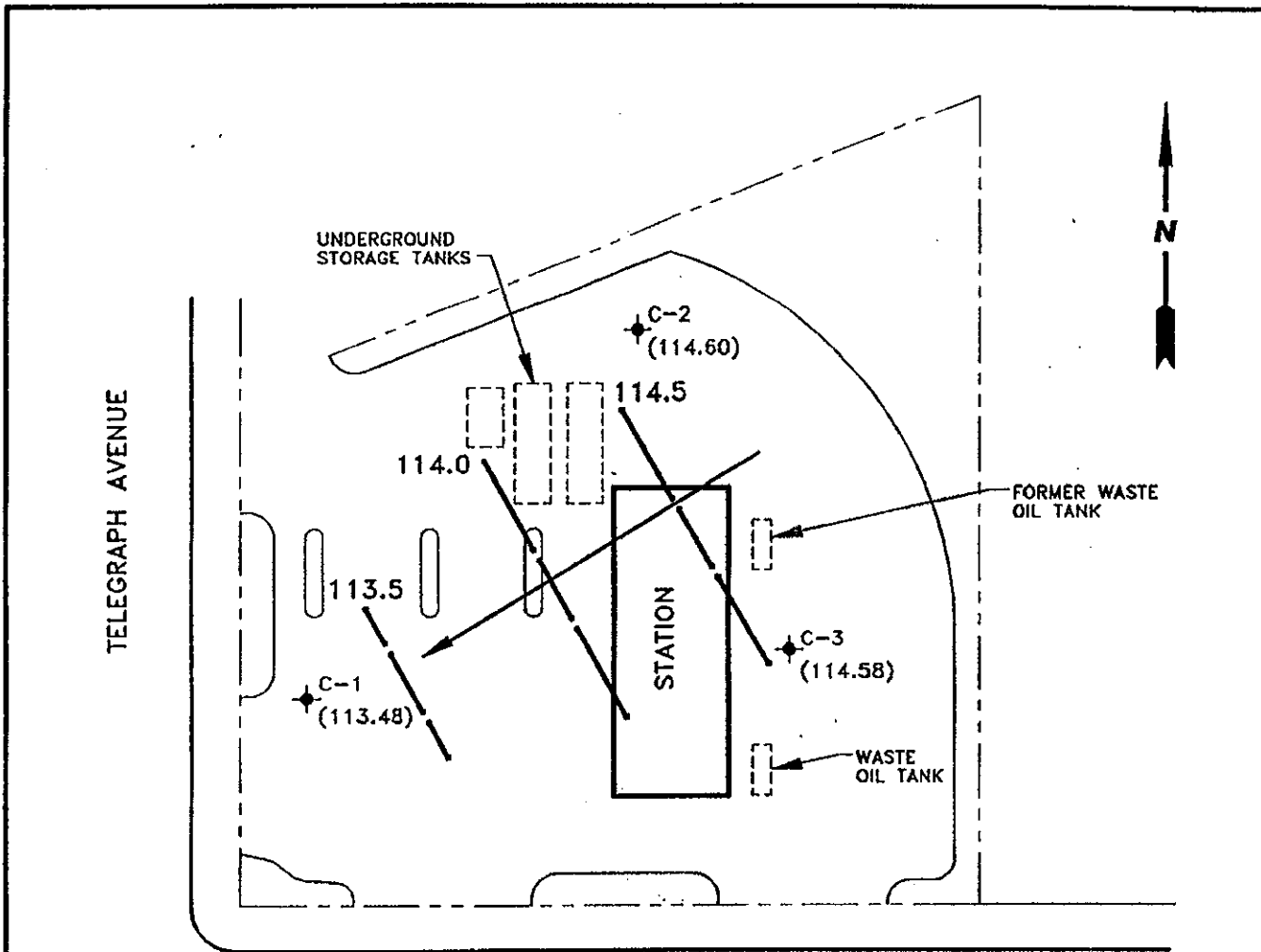
ATTACHMENT  
**2**

**Chevron Service Station #9-0338**  
5500 Telegraph Avenue  
Oakland, California



C A M B R I A

Site Plan



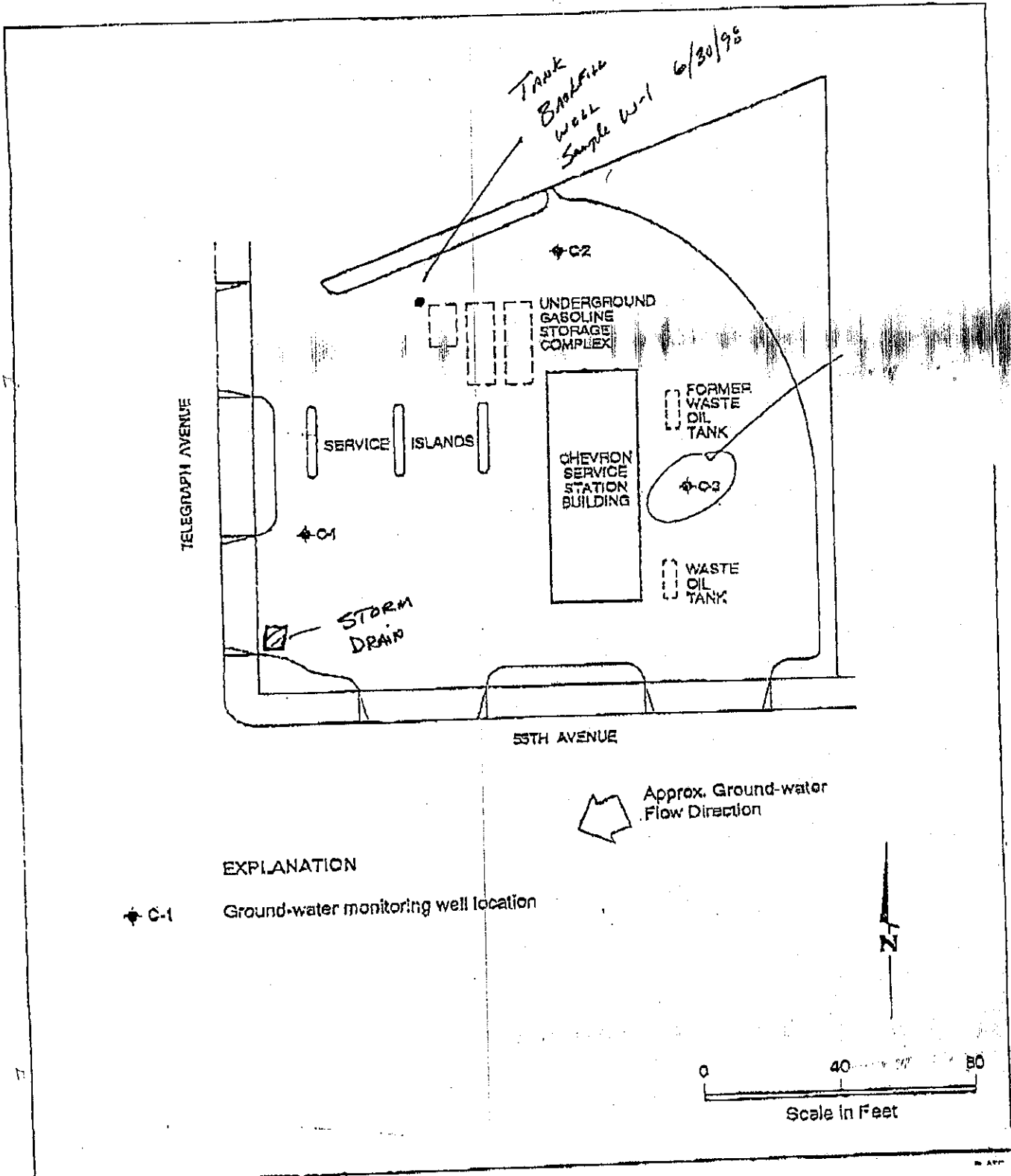
**LEGEND**

- ◆ MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION

**ATTACHMENT 3**



		<b>GROUNDWATER TECHNOLOGY</b> 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 671-2387		<b>POTENTIOMETRIC SURFACE MAP</b> (11/5/93)			
<b>CLIENT:</b> CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0338			<b>LOCATION:</b> 5500 TELEGRAPH AVENUE OAKLAND, CALIFORNIA		<b>REV. NO.:</b> 0	<b>DATE:</b> 12/9/93	
<b>PM</b> <i>Jaw</i>	<b>PE/RG</b> <i>mb</i>	<b>DESIGNED</b> TW	<b>DETAILED</b> CY	<b>ACAD FILE:</b> PSMD93	<b>PROJECT NO.:</b> 020204116	<b>FIGURE:</b> 1	



EXPLANATION

◆ C-1 Ground-water monitoring well location

Approx. Ground-water Flow Direction

0 40 80  
Scale in Feet

**GSI** GeoStrategies Inc.

Site Plan  
Chevron Service Station #  
5500 Telegraph Avenue  
Oakland, California

**ATTACHMENT 4A**

JOB NUMBER  
7263

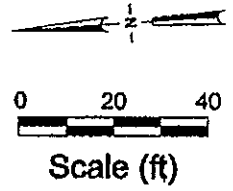
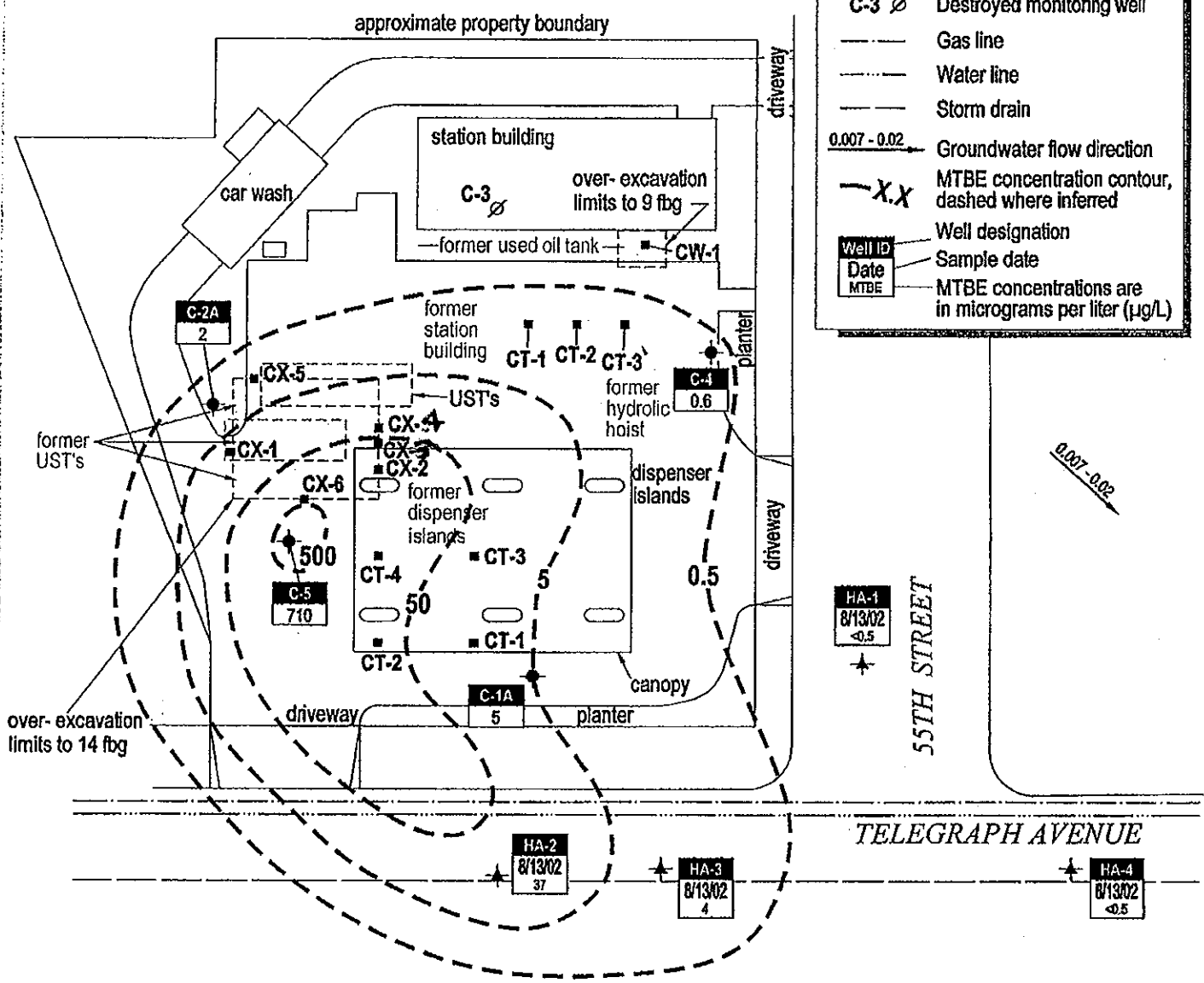
REVIEWED BY RGV/EG  
CMP CEY 1262

DATE  
1/90

REVISED DATE

REVISED DATE

EXPLANATION	
HA-1	✦ Hand-auger boring location
C-2	◆ Monitoring well location
CT-1	■ Soil sample location
C-3	∅ Destroyed monitoring well
---	Gas line
---	Water line
---	Storm drain
0.007 - 0.02	→ Groundwater flow direction
-X.X-	MTBE concentration contour, dashed where inferred
Well ID	Well designation
Date	Sample date
MTBE	MTBE concentrations are in micrograms per liter (µg/L)



ATTACHMENT  
**4**

Chevron Service Station #9-0338  
5500 Telegraph Avenue  
Oakland, California

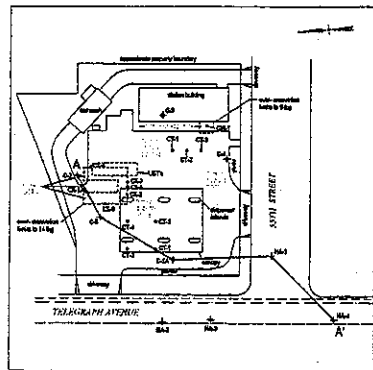
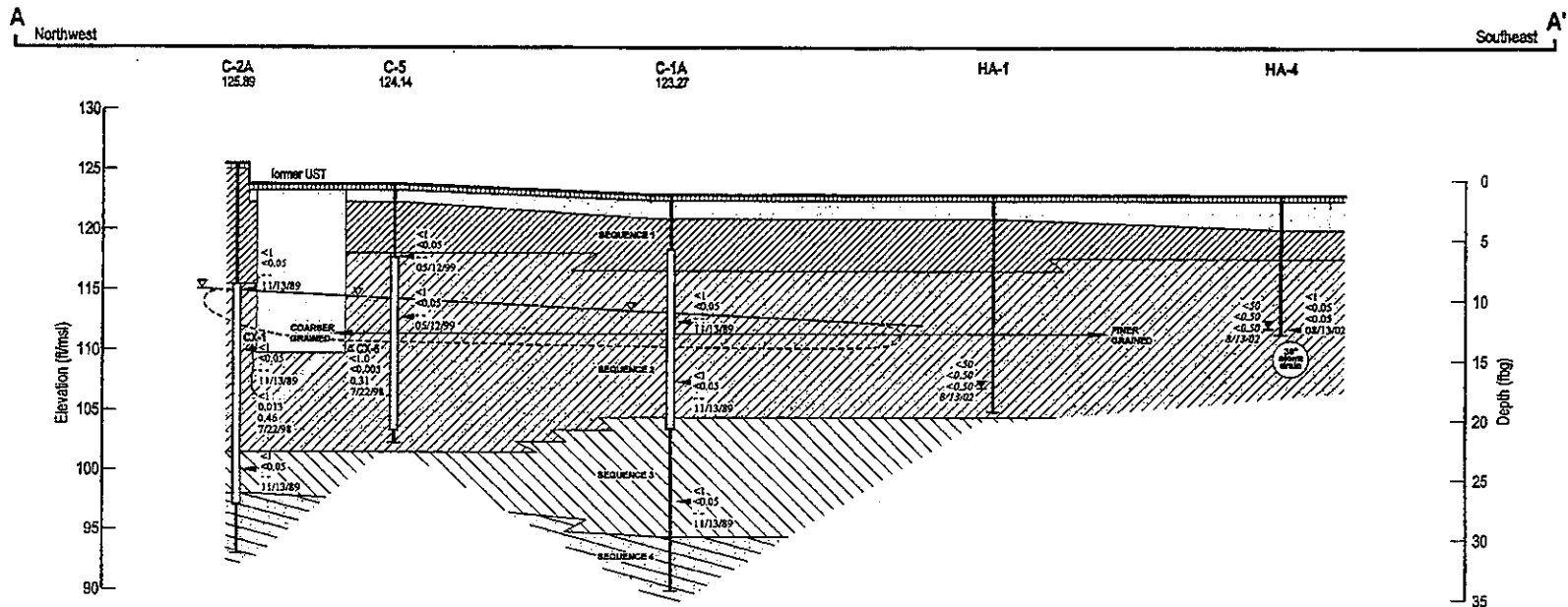


C A M B R I A

MTBE Isoconcentration Map

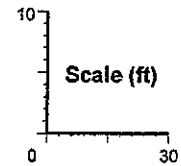
August 31, 2005





**EXPLANATION**

	Sequence 1 - Clay and Silt with Sand	Well ID	Well Designation
	Sequence 2 - Clayey Gravel and Gravelly Clay to Clay With Sand and Gravel	Elev.	Top of Casing Elevation
	Sequence 3 - Silty Sand		Groundwater Monitoring Well
	Sequence 4 - Sandy Clay with Gravel		Well Screen Interval
	= Fill (Tank Pit)		Bottom of boring
	= Asphalt	CX-1	UST Excavation samples
	Extent MTBE Plume on 8/31/05		Depth of Groundwater on 8/31/05
	Water Table on 8/31/05		Depth of Groundwater
	Approximate sample location		
TPHg Benzene MTBE DATE	Hydrocarbon concentrations in Soil, in parts per million	TPHg Benzene MTBE DATE	Hydrocarbon concentrations in Groundwater, in parts per bill



FIGURE

# ATTACHMENT 6



Table 1. Historical Soil Data - Chevron Station 9-0338, Oakland, California

Soil Sample ID	Date	Depth	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TPHd	O&G	Lead
Concentrations in parts per million (mg/kg) unless otherwise noted											
<b>Used-Oil Tank Excavation</b>											
WOOP	10/5/1988	8	--	--	--	--	--	--	<10	<50	--
<b>Pump Island and Product Line Excavation</b>											
1	7/11/1989	6.75	<1	<0.05	<0.1	<0.1	<0.1	--	--	--	--
2	7/11/1989	6.75	130	<0.05	<0.1	2.2	3	--	--	--	--
3	7/11/1989	6.25	<1	<0.05	<0.1	<0.1	<0.1	--	--	--	--
4	7/11/1989	6.25	480	0.31	<0.1	10	28	--	--	--	--
<b>Monitoring Wells</b>											
C-1	11/13/1989	10.5	<1	<0.05	<0.05	<0.05	<0.05	--	--	--	--
C-1	11/13/1989	15.5	<1	<0.05	<0.05	<0.05	<0.05	--	--	--	--
C-1	11/13/1989	25.5	<1	<0.05	<0.05	<0.05	<0.05	--	--	--	--
C-2	11/13/1989	10.5	<1	<0.05	<0.05	<0.05	<0.05	--	--	--	--
C-2	11/13/1989	15.5	<1	<0.05	<0.05	<0.05	<0.05	--	--	--	--
C-2	11/13/1989	25.5	<1	<0.05	<0.05	<0.05	<0.05	--	--	--	--
C-3	11/13/1989	10.5	<1	<0.05	<0.05	<0.05	<0.05	--	<10	<20	--
C-3	11/13/1989	15.5	<1	<0.05	<0.05	<0.05	<0.05	--	<10	<20	--
C-3	11/13/1989	25.5	<1	<0.05	<0.05	<0.05	<0.05	--	<10	<20	--
<b>Used-Oil UST Excavation</b>											
CW-1	7/22/1988	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<1.0	130	<1.0
<b>Former Gasoline UST Complex Excavation</b>											
CX-1	7/22/1988	9	<1.0	0.013	0.0058	0.044	0.067	0.46	--	--	5.1
CX-2	7/22/1988	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.28	--	--	6.8
CX-3	7/22/1988	9	<1.0	<0.0050	<0.0050	<0.0050	0.0056	0.21	--	--	5.1
CX-4	7/22/1988	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.74	--	--	3.3
CX-5	7/22/1988	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	6.4
CX-6	7/22/1988	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.31	--	--	6.2
<b>Hydraulic Lifts/Sand-Water Separator Excavations</b>											
CT-3	7/27/1988	9	1.6 <sup>1</sup>	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	2000 <sup>2</sup>	2600	<1.0
<b>Product Lines</b>											
CT-1	7/27/1988	3.5	<1.0	<0.0050	<0.0050	<0.0050	0.012	<0.050	--	--	<1.0
CT-2	7/27/1988	3.5	<1.0	<0.0050	<0.0050	<0.0050	0.0057	<0.050	--	--	2.8
CT-3	7/27/1988	4	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	1
CT-4	7/27/1988	4	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	<1.0
CT-5	7/27/1988	4	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	<1.0
<b>Monitoring Wells</b>											
C4	5/12/1999	6	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--
C4	5/12/1999	11	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--
C4	5/12/1999	16	--	--	--	--	--	--	--	--	--
C5	5/12/1999	6	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--	--	--
C5	5/12/1999	11	1.3	0.017	<0.0050	<0.0050	0.012	0.1	--	--	--
<b>Hand Augers</b>											
HA1	8/12/2002	11.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050	--	--	--
HA2	8/12/2002	12	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050	--	--	--
HA3	8/13/2002	11	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050	--	--	--
HA4	8/13/2002	11	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<0.050	--	--	--

Analytical Laboratory  
 Sequoia Analytical (ELAP #1271)  
 Lancaster Laboratories (ELAP #2116)

Analytical Methods  
 TPHg = Total petroleum hydrocarbons as gasoline according to EPA method 8015 modified / LUFT methods  
 TPHd = Total petroleum hydrocarbons as diesel according to EPA method 8015 modified  
 TPHho = Total petroleum hydrocarbons as hydraulic oil according to EPA method 8015 modified  
 MTBE = Methyl tertiary butyl ether according to EPA method 8020/8021B  
 O&G = Total oil and grease according to standard methods 5520 E & F  
 VOCs = volatile organic compounds according to EPA method 8240 or 8010  
 SVOCs = semi-volatile organic compounds according to EPA method 8270  
 TPHg, benzene, toluene, ethylbenzene, xylenes, MTBE = EPA methods 8030/8015/8020  
 Porosity, densities = method API RP-40  
 BTEX by EPA 8021B

Explanation  
 ppm = parts per million  
 ppb = parts per billion  
 ND = not detected  
 -- = analysis not requested  
 1 = unidentified hydrocarbons <C8  
 2 = unidentified hydrocarbon <C13  
 3 = none of the constituent analytes were detected. Refer to analytical results  
 4 = unidentified hydrocarbon <C18  
 5 = Numerous SVOC constituents were detected in the sample. Refer to the chemical analytical data for constituents and individual concentrations  
 ft = feet  
 gm/cc = gram per cubic centimeter

Table 2. Historical Grab-groundwater Data - Chevron Station 9-0338, Oakland, California

Sample ID	Date	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE	DIPE	TAME	TBA
Concentrations in parts micrograms per liter( $\mu$ L)											
W-1	6/30/1998	<50	<0.5	<0.5	<0.5	<0.5	15,000				
HA1-W	8/13/2002	<50	<0.5	<0.5	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<5.0
HA2-W	8/13/2002	<50	<0.5	<0.5	<0.5	<1.5	37	<0.5	<0.5	<0.5	<5.0
HA3-W	8/13/2002	<50	<0.5	<0.5	<0.5	<1.5	4	<0.5	<0.5	<0.5	<5.0
HA4-W	8/13/2002	<50	<0.5	<0.5	<0.5	<1.5	<0.5	<0.5	<0.5	<0.5	<5.0

**Analytical Methods**

TPHg = Total petroleum hydrocarbons as gasoline according to EPA method 8015 modified / LUFT methods

Benzene, toluene, ethylbenzene, xylenes by EPA method 8260B

MTBE = Methyl tertiary butyl ether according to EPA method 8260B

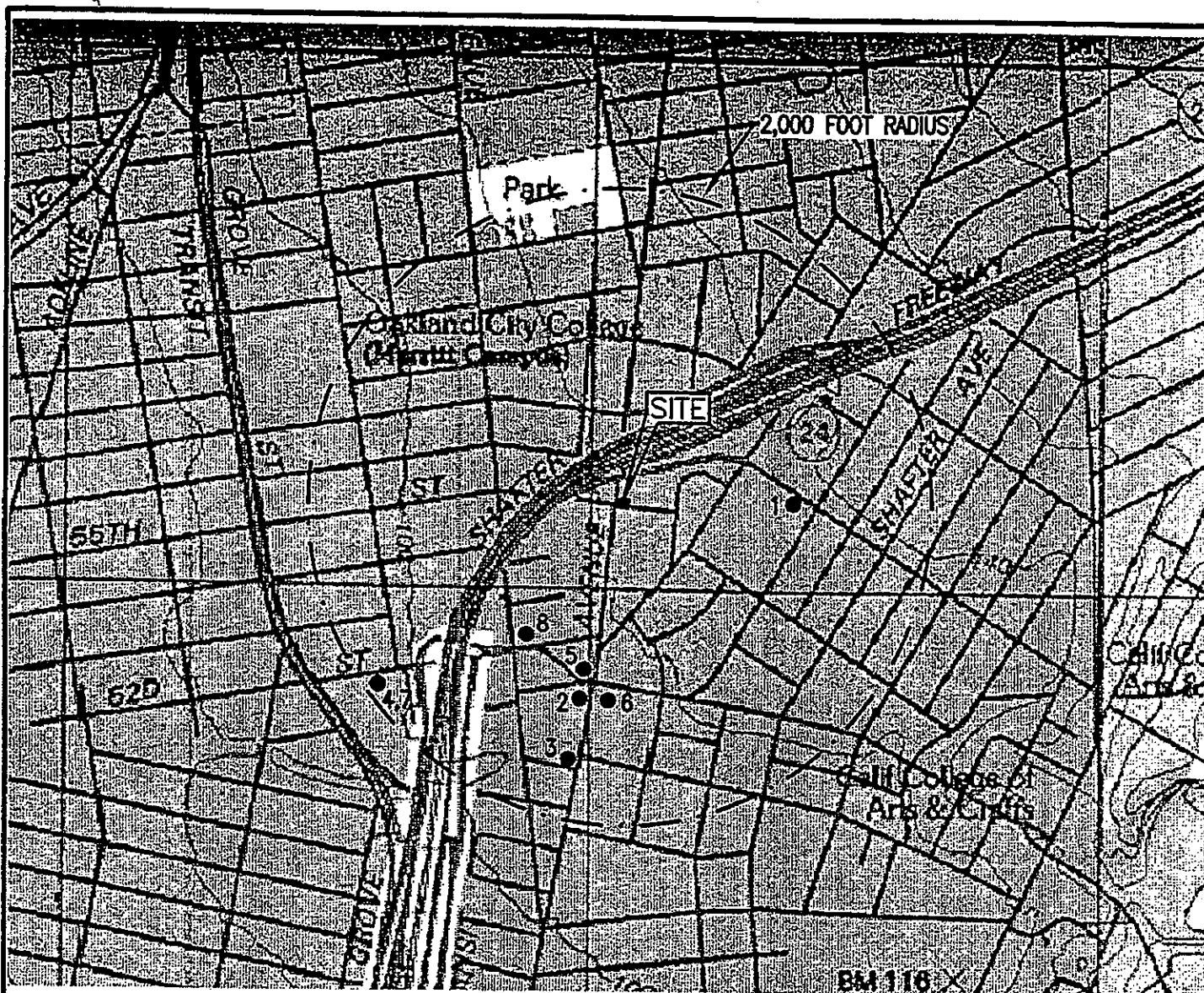
ETBE= Ethyl tert-butyl ether by EPA Method 8260B

DIPE= di-Isopropyl ether by EPA Method 8260B

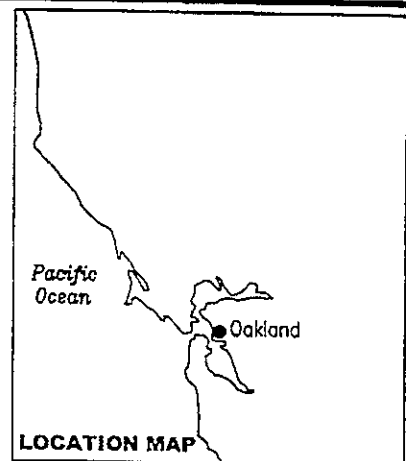
TAME= tert-amyl methyl ether by EPA Method 8260B

TBA= tert-butyl alcohol by EPA Method 8260B

## ATTACHMENT 8

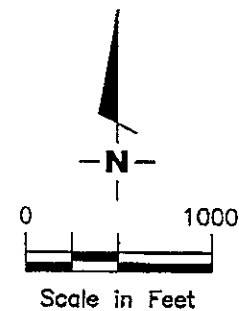


Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.



**EXPLANATION**

- Well Location



FIGURE

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

**WELL SEARCH MAP**  
 Chevron Service Station No. 9-0338  
 5500 Telegraph Avenue  
 Oakland, California

**ATTACHMENT 9**

PROJECT NUMBER  
 DG90338B.3C01

REVIEWED BY

DATE  
 7/01

REVISED DATE

**TABLE 1 - DWR Well Search Results**

Chevron Service Station No. 9-0338

5500 Telegraph Avenue

Oakland, California

Map ID	Well Owner	Well Location	Well Use	State Well Number	Year Installed
1	Pacific Gas & Electric	Clifton and Claremont	Cathodic	01S04W13M80	1975
2	Pacific Rim Development	51st St and Telegraph Ave	2 MWs	01S04W14R03,02	1987
3	Oakland Shopping Center	49th St and Telegraph Ave	Test Wells	01S04W14R	1987
4	Children's Hospital	747 52nd St	Test Wells	01S04W14R	1987
5	Chevron USA	5101 Telegraph Ave	5 MWs	01S04W14R4,5,6,7	1990
6	Berkeley Farms Land Co.	Corner of 51st St and Telegraph Ave	5 MWs	01S04W14R8-12	1991
7	Children's Hospital	747 52nd St	Irrigation	01S04W14R13	1992
8	Arco Products Co.	5131 Shattuck Ave	7 MWs	01S04W14R14-20	1993

**Notes**

MWs = monitoring wells

Data obtained from Department of Water Resources files in Sacramento on June 25, 2001

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Chevron Service Station #9-0338  
 5500 Telegraph Avenue  
 Oakland, California

WELL ID/ DATE	TOC ( <i>µ</i> L)	GWE ( <i>msl</i> )	DTW ( <i>ft</i> )	TPH-G ( <i>ppb</i> )	B ( <i>ppb</i> )	T ( <i>ppb</i> )	E ( <i>ppb</i> )	X ( <i>ppb</i> )	MTBE ( <i>ppb</i> )
<b>C-1A</b>									
05/27/99	123.27	115.93	7.34	9,100	40	25	560	1,900	35
09/02/99	123.27	115.72	7.55	9,700	24	18.4	626	754	66
10/27/99	123.27	115.84	7.43	4,740	<10	<10	276	270	<100/66.6 <sup>2</sup>
02/11/00	123.27	115.27	8.00	5,100	17.5	<10	182	333	<50
05/10/00	123.27	116.65	6.62	11,000 <sup>1</sup>	110	170	480	980	<500
07/27/00	123.27	115.14	8.13	6,200 <sup>1</sup>	<50	<50	540	150	<250
11/21/00	123.27	115.60	7.67	6,500 <sup>1</sup>	19	<10	450	360	<50
02/05/01	123.27	115.91	7.36	5,270	1.43	1.04	326	269	15.0
05/07/01	123.27	115.90	7.37	3,000 <sup>1</sup>	37	27	520	490	63
08/06/01	123.27	115.15	8.12	3,300 <sup>1</sup>	3.1	3.8	160	100	47
11/12/01	123.27	116.42	6.85	5,100	1.9	<2.0	230	230	3.1
02/11/02	123.27	114.99	8.28	820	1.3	<0.50	21	7.7	5.7/4 <sup>3</sup>
05/13/02	123.27	114.30	8.97	1,800	<1.0	<0.50	26	8.6	7.5
08/09/02	123.27	114.33	8.94	2,100	1.7	<5.0	29	<20	<2.5
11/07/02	123.27	114.37	8.90	2,600	<2.0	1.0	13	54	7.9
02/04/03	123.27	115.47	7.80	640	<2.0	<2.0	4.4	6.3	7.8
05/05/03	123.27	115.84	7.43	980	<2.0	0.5	19	10	7.3
08/28/03 <sup>5</sup>	123.27	114.16	9.11	2,100	<0.5	<0.5	7	4	7
11/26/03 <sup>5</sup>	123.27	113.74	9.53	490	<0.5	<0.5	<0.5	<0.5	11
02/25/04 <sup>5</sup>	123.27	116.41	6.86	<50	<0.5	<0.5	<0.5	.3	3
05/22/04 <sup>5</sup>	123.27	114.15	9.12	110	<0.5	<0.5	<0.5	<0.5	6
08/20/04 <sup>5</sup>	123.27	114.06	9.21	700	<0.5	<0.5	17	<0.5	4
11/05/04 <sup>5</sup>	123.27	114.38	8.89	330	<0.5	<0.5	<0.5	<0.5	9
02/14/05 <sup>5</sup>	123.27	114.47	8.80	<50	<0.5	<0.5	<0.5	<0.5	0.9
05/16/05 <sup>5</sup>	123.27	114.96	8.31	<50	<0.5	<0.5	<0.5	<0.5	0.6
08/31/05 <sup>5</sup>	123.27	113.77	9.50	<50	0.5	0.8	<0.5	5	5
<b>C-2A</b>									
05/27/99	125.89	119.53	6.36	<50	<0.5	<0.5	<0.5	<0.5	44
09/02/99	125.89	117.04	8.85	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/27/99	125.89	116.65	9.24	<50	<0.5	<0.5	<0.5	<0.5	8.75/7.77 <sup>2</sup>
02/11/00	125.89	117.64	8.25	<50	<0.5	<0.5	<0.5	<0.5	17.8
05/10/00	125.89	117.46	8.43	<50	<0.50	<0.50	<0.50	<0.50	3.2
07/27/00	125.89	116.34	9.55	<50	<0.50	<0.50	<0.50	<0.50	20

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-0338  
5500 Telegraph Avenue  
Oakland, California

WELL ID/ DATE	TOC ( <i>µ</i> L)	GWE ( <i>msl</i> )	DTW ( <i>ft</i> )	TPH-G ( <i>ppb</i> )	B ( <i>ppb</i> )	T ( <i>ppb</i> )	E ( <i>ppb</i> )	X ( <i>ppb</i> )	MTBE ( <i>ppb</i> )
C-2A (cont)									
11/21/00	125.89	116.39	9.50	<50	<0.50	<0.50	<0.50	<0.50	<50
02/05/01	125.89	116.50	9.39	<50.0	<0.500	<0.500	<0.500	<0.500	3.36
05/07/01	125.89	116.29	9.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5
08/06/01	125.89	115.72	10.17	<50	<0.50	0.59	<0.50	1.4	12
11/12/01	125.89	115.28	10.61	<50	<0.50	<0.50	<0.50	<1.5	3.4
02/11/02	125.89	117.31	8.58	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>3</sup>
05/13/02	125.89	115.76	10.13	1,100	17	83	21	99	29
08/09/02	125.89	116.76	9.13	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/07/02	125.89	114.37	11.52	<50	<0.50	<0.50	<0.50	<1.5	7.5
02/04/03	125.89	116.87	9.02	<50	<0.50	<0.50	<0.50	<1.5	<2.5
05/05/03	125.89	116.61	9.28	<50	<0.5	<0.5	<0.5	<1.5	<2.5
08/28/03 <sup>5</sup>	125.89	114.98	10.91	<50	<0.5	<0.5	<0.5	<0.5	1
11/26/03 <sup>5</sup>	125.89	114.73	11.16	<50	<0.5	<0.5	<0.5	<0.5	3
02/25/04 <sup>5</sup>	125.89	117.47	8.42	<50	<0.5	<0.5	<0.5	<0.5	0.5
05/22/04 <sup>5</sup>	125.89	115.68	10.21	<50	<0.5	<0.5	<0.5	<0.5	2
08/20/04 <sup>5</sup>	125.89	114.91	10.98	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/05/04 <sup>5</sup>	125.89	115.73	10.16	<50	<0.5	<0.5	<0.5	<0.5	5
02/14/05 <sup>5</sup>	125.89	116.62	9.27	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/16/05 <sup>5</sup>	125.89	116.89	9.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/31/05 <sup>5</sup>	125.89	114.96	10.93	<50	0.8	1	<0.5	5	2
C-4									
05/27/99	125.40	115.34	10.06	<50	<0.5	<0.5	<0.5	<0.5	44
09/02/99	125.40	114.89	10.51	<50	<0.5	<0.5	<0.5	<0.5	3.1
10/27/99	125.40	115.03	10.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0 <sup>2</sup>
02/11/00	125.40	114.48	10.92	<50	<0.5	<0.5	<0.5	<0.5	2.79
05/10/00	125.40	116.28	9.12	<50	<0.50	<0.50	<0.50	<0.50	<2.5
07/27/00	125.40	113.50	11.90	<50	<0.50	<0.50	<0.50	<0.50	<2.5
11/21/00	125.40	113.76	11.64	<50	<0.50	<0.50	<0.50	<0.50	<2.5
02/05/01	125.40	115.21	10.19	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
05/07/01	125.40	114.45	10.95	<50	<0.50	<0.50	<0.50	<0.50	<2.5
08/06/01	125.40	113.75	11.65	<50	<0.50	0.52	<0.50	1.1	3.2
11/12/01	125.40	113.69	11.71	<50	<0.50	<0.50	<0.50	<1.5	<2.5
02/11/02 <sup>4</sup>	125.40	114.45	10.95	<50	<0.50	<0.50	<0.50	<1.5	72/62 <sup>3</sup>

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-0338  
5500 Telegraph Avenue  
Oakland, California

WELL ID/ DATE	TOC ( <i>µ</i> L)	GWE ( <i>msl</i> )	DTW ( <i>ft.</i> )	TPH-G ( <i>ppb</i> )	B ( <i>ppb</i> )	T ( <i>ppb</i> )	E ( <i>ppb</i> )	X ( <i>ppb</i> )	MTBE ( <i>ppb</i> )
<b>C-4 (cont)</b>									
05/13/02	125.40	113.64	11.76	<50	<0.50	<0.50	<0.50	<1.5	21
08/09/02	125.40	114.50	10.90	<50	<0.50	<0.50	<0.50	<1.5	4.9
11/07/02	125.40	113.72	11.68	<50	<0.50	<0.50	<0.50	<1.5	<2.5
02/04/03	125.40	114.44	10.96	<50	<0.50	<0.50	<0.50	<1.5	81
05/05/03	125.40	114.25	11.15	<50	<0.5	<0.5	<0.5	<1.5	120
08/28/03 <sup>s</sup>	125.40	114.19	11.21	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/26/03 <sup>s</sup>	125.40	113.40	12.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/25/04 <sup>s</sup>	125.40	114.51	10.89	<50	<0.5	<0.5	<0.5	<0.5	16
05/22/04 <sup>s</sup>	125.40	114.29	11.11	<50	<0.5	<0.5	<0.5	<0.5	1
08/20/04 <sup>s</sup>	125.40	113.36	12.04	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/05/04 <sup>s</sup>	125.40	115.08	10.32	<50	<0.5	<0.5	<0.5	<0.5	0.7
02/14/05 <sup>s</sup>	125.40	114.69	10.71	<50	<0.5	<0.5	<0.5	<0.5	2
05/16/05 <sup>s</sup>	125.40	115.46	9.94	<50	<0.5	<0.5	<0.5	<0.5	1
08/31/05 <sup>s</sup>	125.40	114.59	10.81	<50	0.7	1	<0.5	7	0.6
<b>C-5</b>									
05/27/99	124.15	117.54	6.61	2,800	350	73	32	280	2,200/2,500 <sup>2</sup>
09/02/99	124.15	116.27	7.88	570	9.0	<2.5	<2.5	<2.5	890
10/27/99	124.15	116.90	7.25	543	4.22	<0.5	3.28	<0.5	845/1,080 <sup>2</sup>
02/11/00	124.15	117.41	6.74	488	0.56	<0.5	1.45	<0.5	565
05/10/00	124.15	118.36	5.79	140 <sup>1</sup>	3.6	1.2	0.53	2.0	380
07/27/00	124.15	116.92	7.23	260 <sup>1</sup>	1.4	1.2	0.93	2.8	460
11/21/00	124.15	117.47	6.68	130 <sup>1</sup>	0.74	0.73	<0.50	<0.50	350
02/05/01	124.15	117.74	6.41	111	<1.00	<1.00	<1.00	<1.00	197
05/07/01	124.15	117.91	6.24	100 <sup>1</sup>	2.1	1.0	<0.50	0.80	210
08/06/01	124.15	116.74	7.41	94 <sup>1</sup>	0.84	1.2	0.54	1.5	360
11/12/01	124.15	116.82	7.33	58	<0.50	<0.50	<0.50	<1.5	280
02/11/02	124.15	117.90	6.25	<50	<0.50	<0.50	<0.50	<1.5	150/140 <sup>3</sup>
05/13/02	124.15	116.13	8.02	79	7.7	1.2	2.6	5.5	180
08/09/02	124.15	113.13	11.02	<50	<0.50	<0.50	<0.50	<1.5	220
11/07/02	124.15	114.51	9.64	<50	<0.50	<0.50	<0.50	<1.5	300
02/04/03	124.15	117.07	7.08	2,300	210	4.4	250	53	490
05/05/03	124.15	116.63	7.52	350	18	1.7	22	10	620
08/28/03 <sup>s</sup>	124.15	115.25	8.90	59	3	<0.5	4	7	470

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Chevron Service Station #9-0338  
 5500 Telegraph Avenue  
 Oakland, California

WELL ID/ DATE	TOC ( $\mu$ L)	GWE (msl)	DTW (ft.)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>C-5 (cont)</b>									
11/26/03 <sup>S</sup>	124.15	114.49	9.66	190	14	0.5	15	20	640
02/25/04 <sup>S</sup>	124.15	116.54	7.61	<50	0.9	<0.5	4	<0.5	140
05/22/04 <sup>S</sup>	124.15	115.93	8.22	640	90	3	56	73	860
08/20/04 <sup>S</sup>	124.15	114.50	9.65	<50	<0.5	<0.5	<0.5	<0.5	340
11/05/04 <sup>S</sup>	124.15	115.51	8.64	1,400	84	3	120	160	780
02/14/05 <sup>S</sup>	124.15	116.62	7.53	<50	<0.5	<0.5	<0.5	<0.5	28
05/16/05 <sup>S</sup>	124.15	115.89	8.26	<50	<0.5	<0.5	<0.5	<0.5	190
08/31/05 <sup>S</sup>	124.15	114.81	9.34	240	13	<0.5	13	14	710
<b>TRIP BLANK</b>									
05/27/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/02/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
10/27/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
02/11/00	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/10/00	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
07/27/00	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
11/21/00	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
02/05/01	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
05/07/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
08/06/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
<b>QA</b>									
11/12/01	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
02/11/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
05/13/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
08/09/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/07/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
02/04/03	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
05/05/03	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5
08/28/03 <sup>S</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/26/03 <sup>S</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/25/04 <sup>S</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/22/04 <sup>S</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/20/04 <sup>S</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/05/04 <sup>S</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5



**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Chevron Service Station #9-0338  
5500 Telegraph Avenue  
Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)
C-1A	02/11/02	--	<100	4	<2	<2	<2
	08/28/03	<50	--	7	--	--	--
	11/26/03	<50	--	11	--	--	--
	02/25/04	<50	--	3	--	--	--
	05/22/04	<50	--	6	--	--	--
	08/20/04	<50	∩	4	<0.5	<0.5	<0.5
	11/05/04	<50	∩	9	<0.5	<0.5	<0.5
	02/14/05	<50	∩	0.9	<0.5	<0.5	<0.5
	05/16/05	<50	∩	0.6	<0.5	<0.5	<0.5
08/31/05	<50	∩	5	<0.5	<0.5	<0.5	
C-2A	02/11/02	--	<100	<2	<2	<2	<2
	08/28/03	<50	--	1	--	--	--
	11/26/03	<50	--	3	--	--	--
	02/25/04	<50	--	0.5	--	--	--
	05/22/04	<50	--	2	--	--	--
	08/20/04	<50	∩	<0.5	<0.5	<0.5	<0.5
	11/05/04	<50	∩	5	<0.5	<0.5	<0.5
	02/14/05	<50	∩	<0.5	<0.5	<0.5	<0.5
	05/16/05	<50	∩	<0.5	<0.5	<0.5	<0.5
08/31/05	<50	∩	2	<0.5	<0.5	<0.5	
C-4	02/11/02	--	<100	62	<2	<2	<2
	08/28/03	<50	--	<0.5	--	--	--
	11/26/03	<50	--	<0.5	--	--	--
	02/25/04	<50	--	16	--	--	--
	05/22/04	<50	--	1	--	--	--
	08/20/04	<50	∩	<0.5	<0.5	<0.5	<0.5
	11/05/04	<50	∩	0.7	<0.5	<0.5	<0.5
	02/14/05	<50	∩	2	<0.5	<0.5	<0.5
	05/16/05	<50	∩	1	<0.5	<0.5	<0.5
08/31/05	<50	∩	0.6	<0.5	<0.5	<0.5	

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
 Chevron Service Station #9-0338  
 5500 Telegraph Avenue  
 Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)
C-5	02/11/02	--	<100	140	<2	<2	<2
	08/28/03	<50	--	470	--	--	--
	11/26/03	<50	--	640	--	--	--
	02/25/04	<50	--	140	--	--	--
	05/22/04	<50	--	860	--	--	--
	08/20/04	<50	<5	340	<0.5	<0.5	2
	11/05/04	<50	23	780	<0.5	<0.5	5
	02/14/05	<50	<5	28	<0.5	<0.5	<0.5
	05/16/05	<50	10	190	<0.5	<0.5	1
	08/31/05	<50	38	710	<0.5	<0.5	5

**Table 2**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Chevron Service Station #9-0338  
5500 Telegraph Avenue  
Oakland, California

**EXPLANATIONS:**

TBA = Tertiary butyl alcohol  
MTBE = Methyl tertiary butyl ether  
DIPE = Di-isopropyl ether  
ETBE = Ethyl tertiary butyl ether  
TAME = Tertiary amyl methyl ether  
(ppb) = Parts per billion  
-- = Not Analyzed

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

**Table 3**  
**Groundwater Analytical Results**  
 Chevron Service Station #9-0338  
 5500 Telegraph Avenue  
 Oakland, California

WELL ID	DATE	Cadmium (ppb)	Chromium (ppb)	Lead (ppb)	Nickel (ppb)	Zinc (ppb)	TOG (ppb)	HVOCs (ppb)
C-4	02/11/02	<10.0	80.5	16.7	126	143	<320	<0.20-<0.50

**EXPLANATIONS:**

TOG = Total Oil and Grease

HVOCs = Halogenated Volatile Organic Compounds

(ppb) = Parts per billion

Note: All HVOCs were not detected (ND) unless otherwise noted.

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Chevron Service Station #9-0338  
 5500 Telegraph Avenue  
 Oakland, California

WELL ID/ DATE	TOC ( <i>µ</i> L)	GWE ( <i>ms</i> )	DTW ( <i>ft</i> )	TPH-G ( <i>ppb</i> )	B ( <i>ppb</i> )	T ( <i>ppb</i> )	E ( <i>ppb</i> )	X ( <i>ppb</i> )	MTBE ( <i>ppb</i> )
QA (cont)									
02/14/05 <sup>s</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/16/05 <sup>s</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/31/05 <sup>s</sup>	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-0338  
5500 Telegraph Avenue  
Oakland, California

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**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to May 10, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing

(ft.) = Feet

GWE = Groundwater Elevation

(msl) = Mean sea level

DTW = Depth to Water

TPH-G = Total Petroleum Hydrocarbons as Gasoline

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl tertiary butyl ether

(ppb) = Parts per billion

-- = Not Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

- <sup>1</sup> Laboratory report indicates gasoline C6-C12.
- <sup>2</sup> Confirmation run.
- <sup>3</sup> MTBE by EPA Method 8260.
- <sup>4</sup> Total Petroleum Hydrocarbons as Diesel (TPH-D) was less than the reporting limit.
- <sup>5</sup> BTEX and MTBE by EPA Method 8260.

Field location of boring:  
(See Plate 2)

Project No.: 7263 Date: 11/13/89 Boring No:  
 Client: Chevron Service Station #0338 C-1  
 Location: 5500 Telegraph Avenue  
 City: Oakland, California Sheet 1  
 Logged by: R.S.Y. Driller: Bayland of 2  
 Casing installation data:

Drilling method: Hollow-Stem Auger  
 Hole diameter: 8-Inch

Top of Box Elevation: 123.88 Datum: MSL  
 Water Level 24.5 10.75  
 Time 11:15 09:08  
 Date 11-13-89 11-21-89

POD (ppm)	Blows/ft or Pressure (ps)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)
				1			
				2			
				3			
0	100	S&H		4			
	150	push	C-1				
	200		5.0	5			
				6			
				7			
				8			
0	100	S&H		9			
	250	push	C-1				
	250		10.5	10			
				11			
				12			
				13			
0	9	S&H		14			
	12		C-1				
	14		15.5	15			
				16			
				17			
				18			
				19			

Description  
 PAVEMENT SECTION - 2.0 feet  
 CLAY with SAND (CL) - very dark brown (10YR 2/2), damp, medium stiff; 15% coarse sand; mottled light brown; brick and wood fragments to 3.0 feet; low plasticity; open voids; no chemical odor.  
 SILT with SAND (ML) - dark yellow brown (10YR 4/6); 15% very fine sand.  
 CLAYEY GRAVEL (GC) - gray (7.5YR 6/0), dense, moist; 75% angular gravel; sand stringers; pockets of silt - 2 mm; no chemical odor.  
 COLOR CHANGE to dark yellow brown (10YR 4/6); no chemical odor.  
 less gravel at 18.0 feet; no chemical odor.

Remarks:

**GSI** GeoStrategies Inc. BORING NO. **C-1**

JOB NUMBER 7263 REVIEWED BY RG/CEG DATE 11/89 REVISED DATE REVISED DATE

*UMP CEG 1262*

Field location of boring:  
  
(See Plate 2)

Project No.: 7263 Date: 11/13/89 Boring No:  
 Client: Chevron Service Station #0338 C-1  
 Location: 5500 Telegraph Avenue  
 City: Oakland, California Sheet 2  
 Logged by: R.S.Y. Driller: Bayland of 2  
 Casing installation data:

Drilling method: Hollow-Stem Auger  
 Hole diameter: 8-Inch

Top of Box Elevation: Datum:  
 Water Level  
 Time  
 Date

PC (ppm)	Blow/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
0	7	S&H		20				SILTY SAND (SM) - dark yellow brown (10YR 4/6), medium dense, very moist; 80% very fine sand; 20% silt; no chemical odor.
	9		C-1	20				
	14		20.5	21				
				22				
				23				
				24				
0	4	S&H		24				COLOR CHANGE to light gray (7.5YR 6/0), saturated; organic fragments; no chemical odor.
	7		C-1	25				
	10		25.5	26				
				27				
				28				
				29				
0	4	S&H		29				SANDY CLAY (CL) - dark yellow brown (10YR 4/4), very stiff, moist; 10% well rounded gravels; 30% fine sand; no chemical odor.
	11		C-1	30				
	20		30.5	31				
				32				same as above; no chemical odor.
	10	S&H		32				Bottom of sample at 33.0 feet. Bottom of boring at 33.0 feet.
	19			33				
	23			33				
				34				
				35				
				36				
				37				
				38				
				39				

Remarks:



# Gettler-Ryan, Inc.

# Log of Boring C-1A

PROJECT: *Chevron SS #9-0338*

LOCATION: *5500 Telegraph Avenue, Oakland, CA.*

GR PROJECT NO.: *346456.02*

SURFACE ELEVATION: *123.27ft. MSL*

DATE STARTED: *05/12/99*

WL (ft. bgs):      DATE:      TIME:

DATE FINISHED: *05/12/99*

WL (ft. bgs): *8.2*      DATE: *05/12/99*      TIME: *17:20*

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *19.5 Feet*

DRILLING COMPANY: *Bay Area Exploration Inc.*

GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
5							<p>Not sampled. Well C-1A replaced well C-1. Well C-1 was drilled out to 31 feet. The boring was backfilled with bentonite to 19.5 feet bgs, then well C-1A was installed in the hole.</p>	
10								
15								
20								
25								
30								
35							Bottom of boring at 31.0 feet.	

Field location of boring:  
(See Plate 2)

Project No.: 7263 Date: 11/13/89 Boring No:  
 Client: Chevron Service Station #0338 C-2  
 Location: 5500 Telegraph Avenue  
 City: Oakland, California Sheet 1  
 Logged by: R.S.Y. Driller: Bayland of 2  
 Casing installation data:

Drilling method: Hollow-Stem Auger  
 Hole diameter: 8-inch

Top of Box Elevation: 124.92 Datum: MSL  
 Water Level 23.0 10.75  
 Time 14:10 10:35  
 Date 11-13-89 11-21-89

PO (ppm)	Blowft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				
				2				
				3				
				4				
0	100	S&H		5				PAVEMENT SECTION - 0.5 feet
	150	push	C-2					
	250		5.5					SILT (ML) - very dark grayish brown (10 YR 3/0), medium stiff, dry; trace very fine sand; rootlets; open voids; no chemical odor.
				6				
				7				
				8				
				9				
0	500	S&H		10				GRAVELLY CLAY (CL) - dark yellow brown (10YR 4/6), hard, moist; 35% angular gravel; 10% fine sand; no chemical odor.
	20		C-2					
	24		10.5					
				11				
				12				
				13				
				14				
0	9	S&H		15				same as above; no chemical odor.
	18		C-2					
	20		15.5					
				16				
				17				
				18				
				19				

Remarks:

Log of Boring

BORING NO



GeoStrategies Inc.

C-2

JOB NUMBER  
7263

REVIEWED BY RG/CEG  
UMP ceg 1262

DATE  
11/89

REVISED DATE

REVISED DATE

Field location of boring:

(See Plate 2)

Project No.: 7263 Date: 11/13/89 Boring No:  
 Client: Chevron Service Station #0338 C-2  
 Location: 5500 Telegraph Avenue  
 City: Oakland, California Sheet 2  
 Logged by: R.S.Y. Driller: Bayland of 2

Casing installation data:

Drilling method: Hollow-Stem Auger

Hole diameter: 8-Inch

Top of Box Elevation: Datum:

PC (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level		Description	
								Time	Date		
0	4	S&H		20		[Diagonal hatching symbol]	[Diagonal hatching symbol]			CLAYEY GRAVEL (GC) - dark yellow brown (10YR 4/4), medium dense, moist; 70% angular to subround gravel; 30% clay; pockets of calcareous nodules; no chemical odor.	
	7		C-2	20.5							
	18		20.5	21							
				22							
				23							
				24							
0	3	S&H		25		[Dotted symbol]	[Dotted symbol]			SILTY SAND (SM) - dark yellow brown (10YR 4/6), medium dense, saturated; 75-80% very fine sand; gray staining around organic fragments; no chemical odor.	
	3		C-2	25.5							
	10		25.5	26							
				27							
				28							
				29							
0	7	S&H		30		[Horizontal hatching symbol]	[Horizontal hatching symbol]			GRAVELLY CLAY with SAND (CL) - dark yellow brown (10YR 4/6), very stiff, moist; 20% angular to subround gravel; 15% medium sand; no chemical odor.	
	10		C-2	30.5							
	14		30.5	31							
				32							
	7	S&H		32							
	10			32							
	15			32.5						Bottom of sample at 32.5 feet. Bottom of boring at 32.5 feet.	
				33							
				34							
				35							
				36							
				37							
				38							
				39							

Remarks:



GeoStrategies Inc.

Log of Boring

BORING NO.

C-2

JOB NUMBER  
7263

REVIEWED BY RSG/CEG

*UMP CEG 12/62*

DATE  
11/89

REVISED DATE

REVISED DATE

# Gettler-Ryan, Inc.

# Log of Boring C-2A

PROJECT: *Chevron SS #9-0338*

LOCATION: *5500 Telegraph Avenue, Oakland, CA.*

GR PROJECT NO.: *346456.02*

SURFACE ELEVATION: *125.89ft. MSL*

DATE STARTED: *05/12/99*

WL (ft. bgs):      DATE:      TIME:

DATE FINISHED: *05/12/99*

WL (ft. bgs): *9.4*      DATE: *05/12/99*      TIME: *17:20*

DRILLING METHOD: *8 in. Hollow Stem Auger*

TOTAL DEPTH: *20.0 Feet*

DRILLING COMPANY: *Bay Area Exploration Inc.*

GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
5							<p>Not sampled. Well C-2A replaced well C-2. Well C-2 was drilled out to 31 feet. The boring was backfilled with bentonite to 20 feet bgs, then well C-2A was installed in the hole.</p>	
10								
15								
20								
25								
30								
35							Bottom of boring at 31.0 feet.	

Field location of boring:  (See Plate 2)	Project No.: 7263	Date: 11/13/89	Boring No:
	Client: Chevron Service Station #0338		C-3
	Location: 5500 Telegraph Avenue		Sheet 1
	City: Oakland, California	Logged by: R.S.Y.	Driller: Bayland
Casing installation data:			

Drilling method: Hollow-Stem Auger  
Hole diameter: 8-inch  
Top of Box Elevation: 125.64 Datum: MSL

PID (ppm)	Blows/ft or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level		Time	Date	Description
								23.5	11.28			
				1								PAVEMENT SECTION - 2.5 feet
				2								
				3								
				4								
0	100	S&H		5					16:00	09:57	11-13-89	SILT (ML) - dark brown (10YR 3/3), stiff, damp; trace fine sand; rootlets; no chemical odor.
	100	push	C-3									
	150		5.5									
				6								
				7								
				8								
				9								
0	6	S&H		10								GRAVELLY CLAY (CL) - dark yellow brown (10YR 4/6), very stiff, moist; 20-30% fine angular gravel; oxidation stains; no chemical odor.
	12		C-3									
	18		10.5									
				11								
				12								
				13								
				14								
0	4	S&H		15								CLAYEY GRAVEL (GC) - dark yellow brown (10YR 3/4), medium dense, saturated; 75% angular to subround gravel; 25% clay; oxidation stains; no chemical odor.
	6		C-3									
	10		15.5									
				16								
				17								
				18								
				19								

Remarks:

Field location of boring: (See Plate 2)

Project No.: 7263 Date: 11/13/89 Boring No: C-3

Client: Chevron Service Station #0338

Location: 5500 Telegraph Avenue

City: Oakland, California

Logged by: R.S.Y. Driller: Bayland Sheet 2 of 2

Casing installation data:

Drilling method: Hollow-Stem Auger

Hole diameter: 8-Inch

Top of Box Elevation: Datum:

PD (ft)	Blowft/L or Pressure (psf)	Type of Sample	Sample Number	Depth (ft)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
0	3	S&H		20				CLAYEY SAND (SC) - dark yellow brown (10YR 4/6), medium dense, very moist; 70% very fine to fine sand; 30% clay; gray staining around black organic fragments; trace rounded gravel; no chemical odor.
	6		C-3	21				
	13		20.5	22				
				23				
				24				
0	7	S&H		25				GRAVELLY SAND (SP) - dark yellow brown (10YR 3/4), medium dense, saturated; 70% medium to coarse sand; 25-30% well rounded gravel; 5% fines; no chemical odor.
	9		C-3	26				
	9		25.5	27				
				28				stiffer at 27.5 feet
				29				
0	7	S&H		30				SANDY CLAY with GRAVEL (CL) - dark yellow brown (10YR 4/6), very stiff, moist; 35-40% medium to coarse sand; 15% gravel; no chemical odor.
	13		C-3	31				
	17		30.5	32				
	7	S&H		33				Bottom of sample at 32.5 feet.
	10			34				Bottom of boring at 32.5 feet.
	15			35				
				36				
				37				
				38				
				39				

Remarks:

Log of Boring

**GSI** GeoStrategies Inc. BORING NO. **C-3**

# Gettler-Ryan, Inc.

# Log of Boring C-4

PROJECT: Chevron SS #9-0338

LOCATION: 5500 Telegraph Avenue, Oakland, CA.

GR PROJECT NO.: 346456.02

SURFACE ELEVATION: 125.40ft. MSL

DATE STARTED: 05/12/99

HL (ft. bgs): 13.0 DATE: 05/12/99 TIME: 10:20

DATE FINISHED: 05/12/99

HL (ft. bgs): 12.8 DATE: 05/12/99 TIME: 17:15

DRILLING METHOD: 8 in. Hollow Stem Auger

TOTAL DEPTH: 21.5 Feet

DRILLING COMPANY: Bay Area Exploration Inc.

GEOLOGIST: Barbara Sieminski

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							PAVEMENT - Concrete over baserock	<p>2" blank PVC (schedule 40) 2" machine slotted PVC (0.02 inch) cap heat cement #3 sand bentonite native</p>
5	0	6	C4-6		[Hatched pattern]	CL	SANDY CLAY (CL) - very dark brown (10YR 2/2), moist, medium stiff, low plasticity; 40% clay, 30% silt, 30% fine to coarse sand, trace fine gravel.	
10	0	19	C4-11		[Dotted pattern]	GC/CL	CLAYEY GRAVEL (GC/CL) - brownish yellow (10YR 6/6), moist, medium dense, 50% subrounded fine to coarse gravel, 40% clay, 10% fine to coarse sand.	
15	0	14	C4-18		[Dotted pattern]	GC/SC	CLAYEY GRAVEL WITH SAND (GC/SC) - yellowish brown (10YR 5/4), saturated, medium dense; 40% subrounded fine to coarse gravel, 30% clay, 30% fine to coarse sand.	
20	0	18	C4-21		[Dotted pattern]	CL-ML	SILTY CLAY (CL-ML) - pale olive (5Y 6/3) mottled brownish yellow (10YR 6/6), moist, very stiff, low plasticity; 50% clay, 40% silt, 10% fine sand.	
21.5							Bottom of boring at 21.5 feet.	
25							(* = converted to equivalent standard penetration blows/ft.)	
30								
35								

# Gettler-Ryan, Inc.

# Log of Boring C-5

PROJECT: <i>Chevron SS #9-0338</i>	LOCATION: <i>5500 Telegraph Avenue, Oakland, CA.</i>
GR PROJECT NO.: <i>346456.02</i>	SURFACE ELEVATION: <i>124.15ft. MSL</i>
DATE STARTED: <i>05/12/99</i>	WL (ft. bgs): <i>13.0</i> DATE: <i>05/12/99</i> TIME: <i>11:20</i>
DATE FINISHED: <i>05/12/99</i>	WL (ft. bgs): <i>8.6</i> DATE: <i>05/12/99</i> TIME: <i>17:15</i>
DRILLING METHOD: <i>8 in. Hollow Stem Auger</i>	TOTAL DEPTH: <i>21.5 Feet</i>
DRILLING COMPANY: <i>Bay Area Exploration Inc.</i>	GEOLOGIST: <i>Barbara Sieminski</i>

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							PAVEMENT - Concrete over baserock	
5	0	7	C5-8		[Hatched pattern]	CL	CLAY (CL) - black (10YR 2/1), moist, medium stiff, low to medium plasticity; 90% clay, 10% fine sand.	
						CL	SANDY CLAY (CL) - brown (10YR 5/3), moist, medium stiff, low plasticity; 60% clay, 40% fine to coarse sand, trace fine gravel.	
10	11	11	C5-11		[Dotted pattern]	CL/GC	GRAVELLY CLAY (CL/GC) - yellowish brown (10YR 5/4) mottled greenish gray (5GY 5/1), damp, stiff, low plasticity; 45% clay, 40% subrounded fine to coarse gravel, 15% fine to coarse sand.	
15	0	18	C5-16		[Dotted pattern]	GC/SC	CLAYEY GRAVEL WITH SAND (GC/SC) - yellowish brown (10YR 5/6), saturated, medium dense; 30-50% subrounded fine to coarse gravel, 30-40% fine to coarse sand, 30% clay.	
20	0	21	C5-21		[Hatched pattern]	CL-ML	SILTY CLAY (CL-ML) - pale olive (5Y 6/3) mottled brownish yellow (10YR 6/6), moist, very stiff, low plasticity; 50% clay, 40% silt, 10% fine sand.	
25							Bottom of boring at 21.5 feet. (* = converted to equivalent standard penetration blows/ft.)	
30								
35								



# Gettler-Ryan, Inc.

# Log of Boring HA-1

PROJECT: *Chevron Service Station No. 9-0338*

LOCATION: *5500 Telegraph Avenue, Oakland, California*

PROJECT NO.: *DG90338H.4C01*

SURFACE ELEVATION:

DATE STARTED: *08/12/02*

WL (ft. bgs): *16.0* DATE: *08/13/02* TIME: *07:52*

DATE FINISHED: *08/12/02*

WL (ft. bgs): DATE: TIME:

DRILLING METHOD: *3 1/2 in. Hand Auger*

TOTAL DEPTH: *18 feet*

DRILLING COMPANY: *Gettler-Ryan*

GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
			Asphalt - 6 inches thick.			
			Base rock - 1.5 feet thick.			
3			CLAY (CL) - black (GLEY 2.5/N), moist, low plasticity; 80% clay, 10% silt, 10% fine sand.	CL		Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
6			CLAY WITH SAND (CL) - light brown (7.5YR 6/4), dry, low plasticity; 80% clay, 20% fine sand.			
9			CLAY WITH GRAVEL (CL) - light brown (7.5YR 6/4), dry; 80% clay, 15% fine gravel, 5% fine sand.			
12	HA1-II.5	■	CLAY (CL) - light brown (7.5YR 6/4), moist; 80% clay, 10% silt, 10% fine gravel.			
15			▽			
18	HA1-W		Bottom of boring at 18 feet bgs.			Grab groundwater sample HA1-W, taken at 18 feet bgs.
21						

<b>Gettler-Ryan, Inc.</b>		<b>Log of Boring HA-2</b>	
PROJECT: <i>Chevron Service Station No. 9-0338</i>		LOCATION: <i>5500 Telegraph Avenue, Oakland, California</i>	
PROJECT NO.: <i>DG90338H.4C01</i>		SURFACE ELEVATION:	
DATE STARTED: <i>08/12/02</i>	WL (ft. bgs): <i>13.0</i>	DATE: <i>08/12/02</i>	TIME: <i>14:20</i>
DATE FINISHED: <i>08/12/02</i>	WL (ft. bgs):	DATE:	TIME:
DRILLING METHOD: <i>3 1/2 in. Hand Auger</i>		TOTAL DEPTH: <i>13.5 feet</i>	
DRILLING COMPANY: <i>Gettler-Ryan</i>		GEOLOGIST: <i>Geoffrey Risse</i>	

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Asphalt - 6 inches thick.	Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
					Base rock - 2.5 feet thick.	
3				CL	CLAY (CL) - black (GLEY 2.5/N), moist; 90% clay, 5% silt, 5% fine sand.	
6					Color changes to light brown (7.5YR 6/4), becomes dry; 80% clay, 10% silt, 10% fine sand.	
9					CLAY WITH SAND (CL) - greenish gray (5G 6/1), moist; 80% clay, 15% fine sand, 5% fine gravel.	
12	HA2-12.0				CLAY WITH GRAVEL (CL) - dark brown (7.5YR 3/4), moist; 80% clay, 20% fine gravel.	
	HA2-W			∇	Bottom of boring at 13.5 feet bgs.	Grab groundwater sample HA2-W, taken at 13.5 feet bgs.
15						
18						
21						

# Gettler-Ryan, Inc.

# Log of Boring HA-3

PROJECT: *Chevron Service Station No. 9-0338*

LOCATION: *5500 Telegraph Avenue, Oakland, California*

PROJECT NO.: *DG90338H.4C01*

SURFACE ELEVATION:

DATE STARTED: *08/12/02*

WL (ft. bgs): *13.0*    DATE: *08/13/02*    TIME: *10:42*

DATE FINISHED: *08/13/02*

WL (ft. bgs):    DATE:    TIME:

DRILLING METHOD: *3 1/2 in. Hand Auger*

TOTAL DEPTH: *13.5 feet*

DRILLING COMPANY: *Gettler-Ryan*


GEOLOGIST: *Geoffrey Risse*

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Asphalt - 6 inches thick. Base rock - 2.5 feet thick.	Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
3				CL	CLAY (CL) - black (GLEY 2.5/N), moist, low plasticity; 95% clay, 6% fine sand.	
6					Color changes to dark brown (7.5YR 3/4), becomes dry; 90% clay, 10% fine sand.	
9					CLAY WITH SAND (CL) - greenish gray (5G 6/1), moist, low plasticity; 15% fine to medium sand, 5% silt.	
12	HA3-II				CLAY (CL) - dark brown (7.5YR 3/4), moist; 80% clay, 10% fine gravel, 10% fine sand.	
13.5	HA3-W			▽	Bottom of boring at 13.5 feet bgs.	Grab groundwater sample HA3-W, taken at 13.5 feet bgs.
15						
18						
21						

# Gettler-Ryan, Inc.

# Log of Boring HA-4

PROJECT: <i>Chevron Service Station No. 9-0338</i>	LOCATION: <i>5500 Telegraph Avenue, Oakland, California</i>
PROJECT NO.: <i>DG90338H.4C01</i>	SURFACE ELEVATION:
DATE STARTED: <i>08/13/02</i>	WL (ft. bgs): <i>11.0</i> DATE: <i>08/13/02</i> TIME: <i>12:00</i>
DATE FINISHED: <i>08/13/02</i>	WL (ft. bgs):        DATE:        TIME:
DRILLING METHOD: <i>3 1/2 in. Hand Auger</i>	TOTAL DEPTH: <i>11.5 feet</i>
DRILLING COMPANY: <i>Gettler-Ryan</i>	GEOLOGIST: <i>Geoffrey Risse</i>

DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Asphalt - 6 inches thick.	
					Base rock - 2 feet thick.	
3				CL	CLAY (CL) - bluish black (5PB 2.5/1), moist, low plasticity; 95% clay, 5% silt.	Boring backfilled with pea gravel to 6 inch below ground surface, then finish to surface grade with concrete.
6					CLAY WITH SAND (CL) - greenish gray (5G 6/1), moist; 80% clay, 15% fine sand, 5% fine gravel.	
9					CLAY (CL) - dark brown (7.5YR 3/4), saturated; 80% clay, 10% fine to coarse gravel, 10% fine to medium sand.	
12	HA4-11 HA4-W			∇	Bottom of boring at 11.5 feet bgs.	
15						
18						
21						