

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
ALEX BRISCOE, Director



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

December 12, 2011

Ms. Olivia Skance  
Chevron Environmental Management  
6001 Bollinger Canyon Rd.  
PO Box 6012  
San Ramon, CA 94583  
(sent via electronic mail to [Olivia.Skance@chevron.com](mailto:Olivia.Skance@chevron.com))

Mr. Kenneth and Carla Betts  
175 Indian Road  
Piedmont, CA 94610-1222

Mr. Doug Durein  
Ken Betts, Inc.  
770 Wesley Way  
Oakland, CA 94610

Subject: Closure Transmittal; Fuel Leak Case No. RO0000256 (Global ID # T0600100353),  
Chevron #9-1740, 6550 Moraga Avenue, Oakland, CA 94611

Dear Ms. Skance, Mr. and Mrs. Betts, and Mr. Durein:

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.

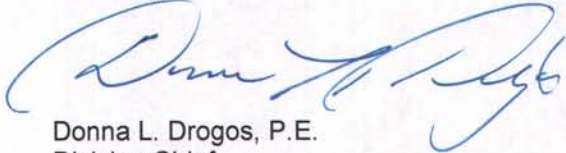
#### SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Residual petroleum hydrocarbon contamination in soil and groundwater remains in place at this site. Contrary to some reports, residual soil contamination is not documented to have been removed around the perimeter of the waste oil overexcavation adjacent to station building and Moraga Avenue (WO-2b, WO-2, and WO-10, WX-11, WX-12, WX-13, WX-7, WX-14, WX-15, and WX-16), and adjacent to Mountain Blvd sidewalk (TX4-5). Additionally, final bottom and perimeter overexcavation confirmation soil samples were not collected from the fuel UST overexcavation. Concentrations up to 800 mg/kg, TPHg, 420 mg/kg TPHd, 580 mg/kg TPHmo, 2,100 TOG, and 16 mg/kg benzene appear to remain in soil beneath the site.
- A soil gas survey has not been conducted at the site.
- Case closure for this fuel leak site is granted for the current commercial land use as a gas station with the one existing building and in the current building configuration only. If a change in land use to any other commercial, residential, or other conservative land use scenario occurs at this site; Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH must also be notified if any construction or excavation activities take place or the building structure is otherwise modified. ACEH will re-evaluate the case upon receipt of approved development/construction plans.
- Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.
- This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

If you have any questions, please call Mark Detterman at (510) 567-6876. Thank you.

Sincerely,



Donna L. Drogos, P.E.  
Division Chief

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

cc: Ms. Cherie McCaulou (w/enc.), SF- Regional Water Quality Control Board, 1515 Clay Street,  
Suite 1400, Oakland, CA 94612, (sent via electronic mail to [CMacaulou@waterboards.ca.gov](mailto:CMacaulou@waterboards.ca.gov))

Leroy Griffin, Oakland Fire Department 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA  
94612-2032 (sent via electronic mail to [lgriffin@oaklandnet.com](mailto:lgriffin@oaklandnet.com))

Donna Drogos, (sent via electronic mail to [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))

Mark Detterman (sent via electronic mail to [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org))

Electronic File, GeoTracker



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770 Wesley Way  
Oakland, CA 94610

**REMEDIAL ACTION COMPLETION CERTIFICATE**

Subject: Fuel Leak Case No. RO0000256 (Global ID # T0600100353), Chevron #9-1740, 6550 Moraga Avenue, Oakland, CA 94611

Dear Ms. Skance, Mr. and Mrs. Betts, and Mr. Durein:

This letter confirms the completion of a site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact our office if you have any questions regarding this matter.

Sincerely,

  
Ariu Levi  
Director

Alameda County Environmental Health

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

**I. AGENCY INFORMATION**

Date: June 23, 2011

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567- 6876
Responsible Staff Person: Mark Detterman	Title: Senior Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Chevron # 9-1740		
Site Facility Address: 6550 Moraga Avenue, Oakland, CA 94611		
RB Case No.: 01-0384	Local Case No.: ---	LOP Case No.: RO0000256
URF Filing Date:	Geotracker ID: T0600100353	APN: 48F-7353-7
Responsible Parties	Addresses	Phone Numbers
Chevron Corporation Stacie Harting-Frerichs	6001 Bollinger Canyon Road San Ramon, CA 94583	(925) 842-9655
Kenneth R & Carla L Betts Trust Kenneth & Carla Betts	175 Indian Road Piedmont, CA 94610	NA
----	----	----

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1,000	Waste Oil	Removed	8/20/1992
2	550	Waste Oil	Removed	10/6/1992
3	10,000	Gasoline	Removed	5/10/1996
4	10,000	Gasoline	Removed	5/10/1996
5	10,000	Gasoline	Removed	5/10/1996
6	10,000	Diesel	Removed	5/10/1996
Piping			Removed	As above

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and Type of Release: 1,000-gallon waste oil UST – No obvious holes or overfilling; heavily contaminated fill 550-gallon waste oil UST – concrete filled; heavily corroded, large holes on bottom 10,000-gallon gasoline UST – No holes or corrosion noted 10,000-gallon gasoline UST – No holes or corrosion noted 10,000-gallon gasoline UST – No holes or corrosion noted 10,000-gallon diesel UST – No holes or corrosion noted		
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: 3.02 ft	Lowest Depth: 22.89 ft	Flow Direction: South to south-southeast
Most Sensitive Current Use: Potential drinking water source.		

\* Wells C-1, C-3, and C-4 have 20 foot long screens; well C-2 has a 25 foot long screen. All screens begin at approximately 5 ft bgs.

Summary of Production Wells in Vicinity: Two wells are within a 2,000 foot radius. One domestic water supply well is located approximately 1,350 feet northwest of the site, while one irrigation well was located approximately 540 feet west of the site. Both wells are located across a groundwater divide, the Hayward Fault, and are cross-gradient to the site; consequently the wells do not appear to be receptors for this site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: Shephard Creek 1,300 feet southeast
Off-Site Beneficial Use Impacts (Addresses/Locations): NA	
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	1,000-gallon waste oil 550-gallon waste oil 10,000-gallon gasoline 10,000-gallon gasoline 10,000-gallon gasoline 10,000-gallon diesel	Assumed disposed; destination not reported	August 1992 October 1992 May 1996 May 1996 May 1996 May 1996
Piping	Not reported	Assumed disposed; destination not reported	As above
Free Product	Not reported	----	----
Soil	54 yds <sup>3</sup> 200 yds <sup>3</sup>  775 yds <sup>3</sup>	Offsite disposal; Forward Inc, Stockton, CA Offsite disposal; Forward Inc, Stockton, CA  Offsite disposal; Vasco Road, Livermore & Redwood Landfill, Novato	August 21, 1992 September 15 to October 19, 1992  May 1996; assumed
Groundwater	35,000 gallons	Discharged to EBMUD	May 20 to 24, 1996

**MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP**  
 (Please see Attachments 1 through 6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	1,100	800	7,900	2,500
TPH (Diesel)	1,200	420	7,500	1,500
TPH (Motor Oil)	2,000	580	Not Analyzed	Not Analyzed
Oil and Grease	3,000	2,100	Not Analyzed	Not Analyzed
Benzene	16	16	1,500	270
Toluene	5.4	5.4	230	7
Ethylbenzene	4.2	4.2	340	3
Xylenes	16	16	350	3
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	110 <sup>1</sup>	65 <sup>2</sup>	Not Analyzed	Not Analyzed
MTBE	0.67 <sup>3</sup>	0.51 <sup>4</sup>	8,500 <sup>5</sup>	250 <sup>6</sup>
Other (8240/8270)	0.003 <sup>7</sup>	0.003 <sup>7</sup>	16 <sup>8</sup>	16 <sup>8</sup>

NS = Not Sampled

<sup>1</sup> 3.9 mg/kg Cd; 110 mg/kg Cr; 22 mg/kg Pb; 86 mg/kg Ni; 100 mg/kg Zn

<sup>2</sup> <0.2 mg/kg Cd; 79 mg/kg Cr; 22 mg/kg Pb; 35 mg/kg Ni; 65 mg/kg Zn

<sup>3</sup> 0.67 mg/kg MTBE; TBA, TAME, ETBE; DIPE, EtOH, EDB; and EDC all not analyzed.

<sup>4</sup> 0.0.51 mg/kg MTBE; TBA, TAME, ETBE; DIPE, EtOH, EDB; and EDC all not analyzed.

<sup>5</sup> 8,500 µg/l MTBE; < 100 µg/l TBA; 30 µg/l TAME; 240 µg/l ETBE; <2 µg/l DIPE; <50 µg/l EtOH; and <2 µg/l EDB, <2 g/l EDC.

<sup>6</sup> 250 µg/l MTBE; other oxygenates were not analyzed.

<sup>7</sup> = Soil bore SB-7 (across Mountain Boulevard) contained 0.002 mg/kg cis-1,2-DCE and 0.003 mg/kg TCE; otherwise, all semi-volatile compounds onsite were non-detectable at various standard limits of detection. Onsite volatile organic compounds were non-detectable at various standard limits of detection.

<sup>8</sup> = Grab groundwater from SB-7 (across Mountain Boulevard) contained PCE at 1 µg/l; cis-1,2 DCE at 16 µg/l; and TCE at 13 µg/l; all other compounds were non-detectable at standard limits of detection.

#### Site History and Description of Corrective Actions:

The site is an active service station in a mixed commercial and residential area. Chevron has operated a service station since approximately 1936. Chevron's records indicate that site improvements were made prior to 1936, indicating station operations prior to Chevron's occupation of the site. The site was remodeled in 1960 and included a new station building, two service bays, four 10,000-gallon fuel USTs one 1,000-gallon waste oil UST and two dispenser islands. The site was remodeled again in 1996 with the removal of existing fuel USTs and the installation of three 10,000-gallon USTs, three dispenser islands, and two service bays.

In March 1991 wells C-1 to C-4 were installed. Well C-1 at a depth of 3.5 to 5 feet bgs contained the maximum detected concentrations. TOG was detected at 710 mg/kg, TPHd at 410 mg/kg, TPHg at 433 mg/kg, benzene, at 2 mg/kg, toluene at 16 mg/kg, ethylbenzene at 5 mg/kg, and total xylenes at 38 mg/kg. In August 1992 a 1,000-gallon waste oil UST was removed and replaced, while a 550-gallon waste oil UST was discovered adjacent to the 1,000-gallon UST. The 550-gallon UST was additionally removed in October 1992. Approximately 254 cubic yards of soil were excavated from the enlarged excavations and exported offsite to three landfills. Well C-1 was destroyed during the October 1992 excavations.

In May and June 1996 the station was remodeled as described above. Concentrations up to 1,100 mg/kg TPHg, 1,200 mg/kg TPHd, 16 mg/kg benzene, 14 mg/kg toluene, 19 mg/kg ethylbenzene, and 22 mg/kg total xylenes were detected, some of which remain in place onsite. Due to elevated concentrations the UST excavations was expanded and ultimately approximately 775 cubic yards of soil were removed during the excavation and subsequent overexcavation. The excavation bottom ranged between 5 and 17.5 feet in depth. The excavation was dewatered and treated onsite, and discharged under permit to the EBMUD sanitary sewer. Approximately 35,000 gallons of treated water was discharged.

Between 2001 and 2004 ORC socks were installed in wells C-2 and C-4.

In October and November 2005, and again in April 2006 nine soil bores were installed to define the lateral extent of hydrocarbons in groundwater. SB-5 to SB-7 were installed in October 2005, SB-1 to SB-4 were installed in November 2005, and GP-1 to GP-4 were installed in April 2006. TPHd, TPHg, BTEX, and MTBE were not detected in soil. Except bore SB-5 grab groundwater in all bores contained detectable concentrations of TPHd (up to 2,800 µg/l in GP-4) in groundwater. In grab groundwater, TPHg was only present in GP-1 at 110 µg/l, toluene was present up to 1.3 µg/l, and total xylenes was only present in GP-1 at 0.52 µg/l. Benzene and ethylbenzene were not detected in the grab groundwater samples. MTBE was only present in grab groundwater from bore SB-7 at a concentration of 4 µg/l.

During the most recent groundwater sampling event (March 4, 2011) only MTBE was present in wells C-2 and C-3 (80 and 3 µg/l, respectively). Well C-4 contained 2,500 µg/l TPHg, 1,500 µg/l TPHd, 270 µg/l benzene, 7 µg/l toluene, 3 µg/l ethylbenzene, 3 µg/l total xylenes, and 250 µg/l MTBE.

**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? 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.		
<p>Site Management Requirements:</p> <p>Case closure for this fuel leak site is granted for the current commercial land use as a gas station with the one existing building and in the current building configuration only. If a change in land use to any other commercial, residential, or other conservative land use scenario occurs at this site; Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH must also be notified if any construction or excavation activities take place or the building structure is otherwise modified. ACEH will re-evaluate the case upon receipt of approved development/construction plans.</p> <p>Excavation or construction activities require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.</p> <p>This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.</p>		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: ----
Monitoring Wells Decommissioned: Yes	Number Decommissioned: 1	Number Retained: 3
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		



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

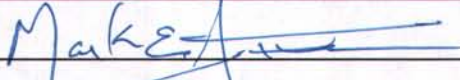
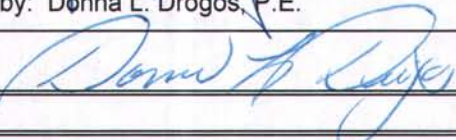
Considerations and/or Variances:

- ♦ Total volume of soil excavated during 1996 UST removals reported, but not documented.
- ♦ Residual petroleum hydrocarbon contamination in soil and groundwater remains in place at this site.
- ♦ Strike-out notations (to indicate subsequently removed data points) contained on a second copy of Table 1 "Historic Soil Analytical Results" included in this package do not appear entirely correct based on data submitted. Specifically, residual soil contamination is not documented to have been removed around the perimeter of the waste oil overexcavation adjacent to station building and Moraga Avenue (WO-2b, WO-2, and WO-10, WX-11, WX-12, WX-13, WX-7, WX-14, WX-15, and WX-16), and adjacent to Mountain Blvd sidewalk (TX4-5). Additionally, final bottom and perimeter overexcavation confirmation soil samples were not collected from the fuel UST overexcavation.
- Monitoring wells C-1, C-3, and C-4 contain(ed) 20 foot screen intervals. Well C-2 contains(ed) a 25 foot screen interval.
  - A soil gas survey has not been conducted at the site.
  - Groundwater has not been sampled for TOG, TRPH, or TPHmo.
  - TBA, TAME, ETBE; DIPE, EtOH, EDB; and EDC all not analyzed in soil.
  - EDC was not analyzed in groundwater.

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 as a gas station with the one existing building in the current configuration, based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary unless a change in land use to any other commercial, residential, or other conservative land use scenario occurs at the site, or excavation activities take place or the building structure is otherwise modified. ACEH staff recommend closure for this site.

**VI. LOCAL AGENCY REPRESENTATIVE DATA**


Prepared by: Mark E. Detterman	Title: Senior Hazardous Materials Specialist
Signature: 	Date: 6/23/11
Approved by: Donna L. Drogos, P.E.	Title: Division Chief
Signature: 	Date: 06/23/11

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
Notification Date: 6/30/11	

**VIII. MONITORING WELL DECOMMISSIONING**

Date Requested by ACEH: 9/16/11	Date of Well Decommissioning Report: 11/2/11	
All Monitoring Wells Decommissioned: Yes <input checked="" type="radio"/> No	Number Decommissioned: 3	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: NA		
ACEH Concurrence - Signature: 	Date: 12/12/11	

**Attachments:**

1. Site Vicinity Map (2 pp)
2. Site Plans (10 pp)
3. Soil Analytical Data (8 pp)
4. Groundwater Analytical Data (15 pp)
5. Boring Logs (11 - 13pp) – Bore logs SB-1 and SB-4 not submitted
6. Cross Sections (2 pp)

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.

## Detterman, Mark, Env. Health

---

**From:** Cherie McCaulou [CMccaulou@waterboards.ca.gov]  
**Sent:** Wednesday, July 06, 2011 1:21 PM  
**To:** Detterman, Mark, Env. Health  
**Subject:** Re: RO0000256; Closure Review Summary for Chevron #9-1740 (T0600100353)

Thank you for the courtesy notice for ACEH's recommendation for case closure of the subject fuel leak release site. The Regional Water Board staff has no objection to ACEH closing this case. It has been a pleasure working with you.

Sincerely,

Cherie McCaulou  
Engineering Geologist  
San Francisco Bay Regional Water Quality Control Board  
[cmccaulou@waterboards.ca.gov](mailto:cmccaulou@waterboards.ca.gov)  
510-622-2342

>>> "Detterman, Mark, Env. Health" <[Mark.Detterman@acgov.org](mailto:Mark.Detterman@acgov.org)> 6/30/2011 3:06 PM >>>  
Hi Cherie,

In order to comply with the RWQCB's 30-day review period, attached is the closure summary for the referenced site, located at 6550 Moraga Avenue, Oakland, CA 94611. If no comments from the RWQCB are received within the 30-day review period, ACEH's will proceed with case closure.

This is an older site, with some history. Residual contamination will be left in place and the site will be placed in the Oakland permit tracking system. Four wells are installed; well destruction is pending RWQCB concurrence.

Should you have questions, please let me know.

(Hope the vacation was good!)

*Mark Detterman*  
*Senior Hazardous Materials Specialist, PG, CEG*  
*Alameda County Environmental Health*  
*1131 Harbor Bay Parkway*  
*Alameda, CA 94502*  
*Direct: 510.567.6876*  
*Fax: 510.337.9335*  
*Email: [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org)*

*PDF copies of case files can be downloaded at:*

*<http://www.acgov.org/aceh/lop/ust.htm>*

# ATTACHMENT 1



SOURCE: TOPOIMAP

figure 1

VICINITY MAP  
CHEVRON SERVICE STATION 9-1740  
6550 MORAGA AVENUE  
*Oakland, California*



Chevron #9-1740  
6550 Moraga Avenue, Oakland, CA 94611



# ATTACHMENT 2

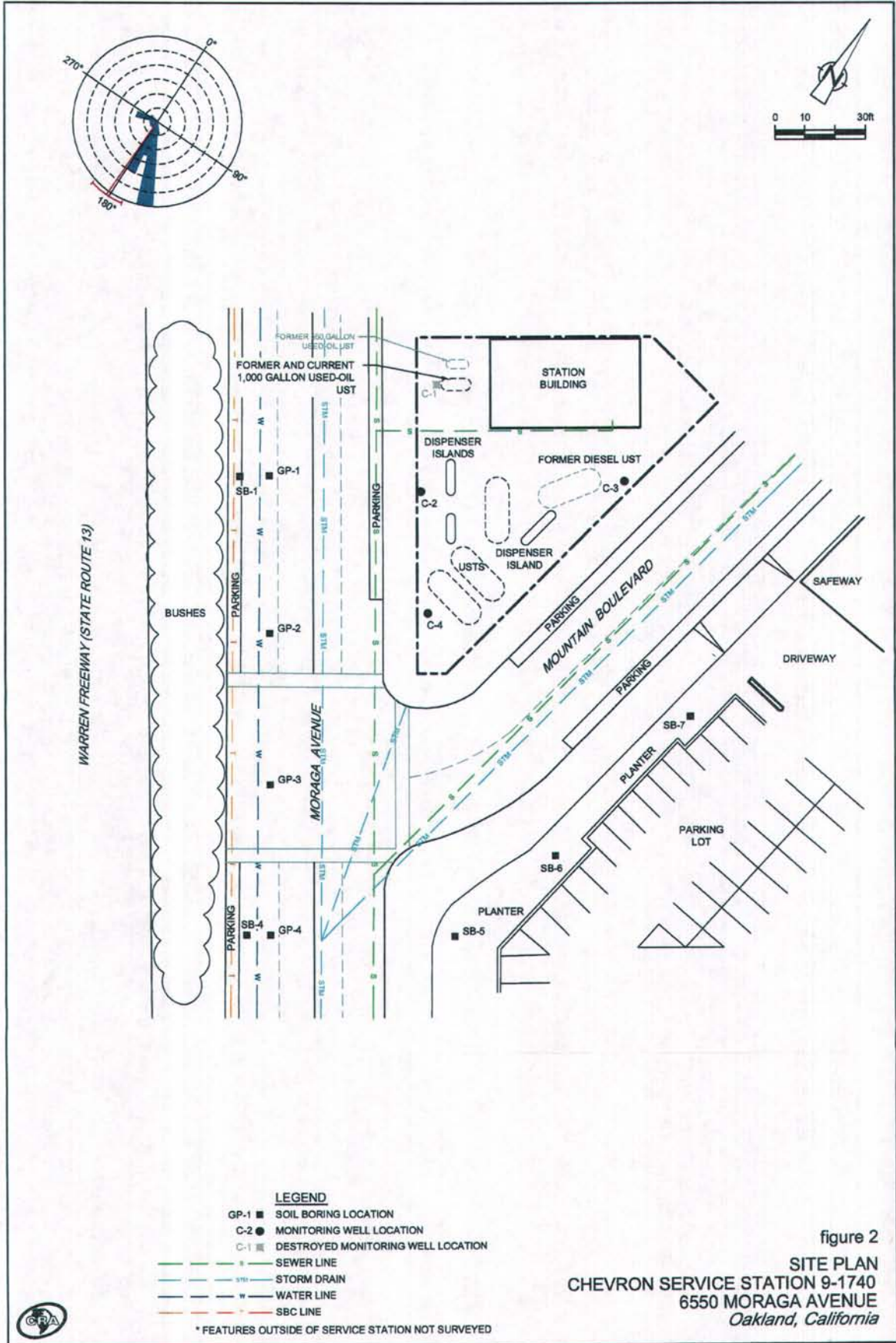
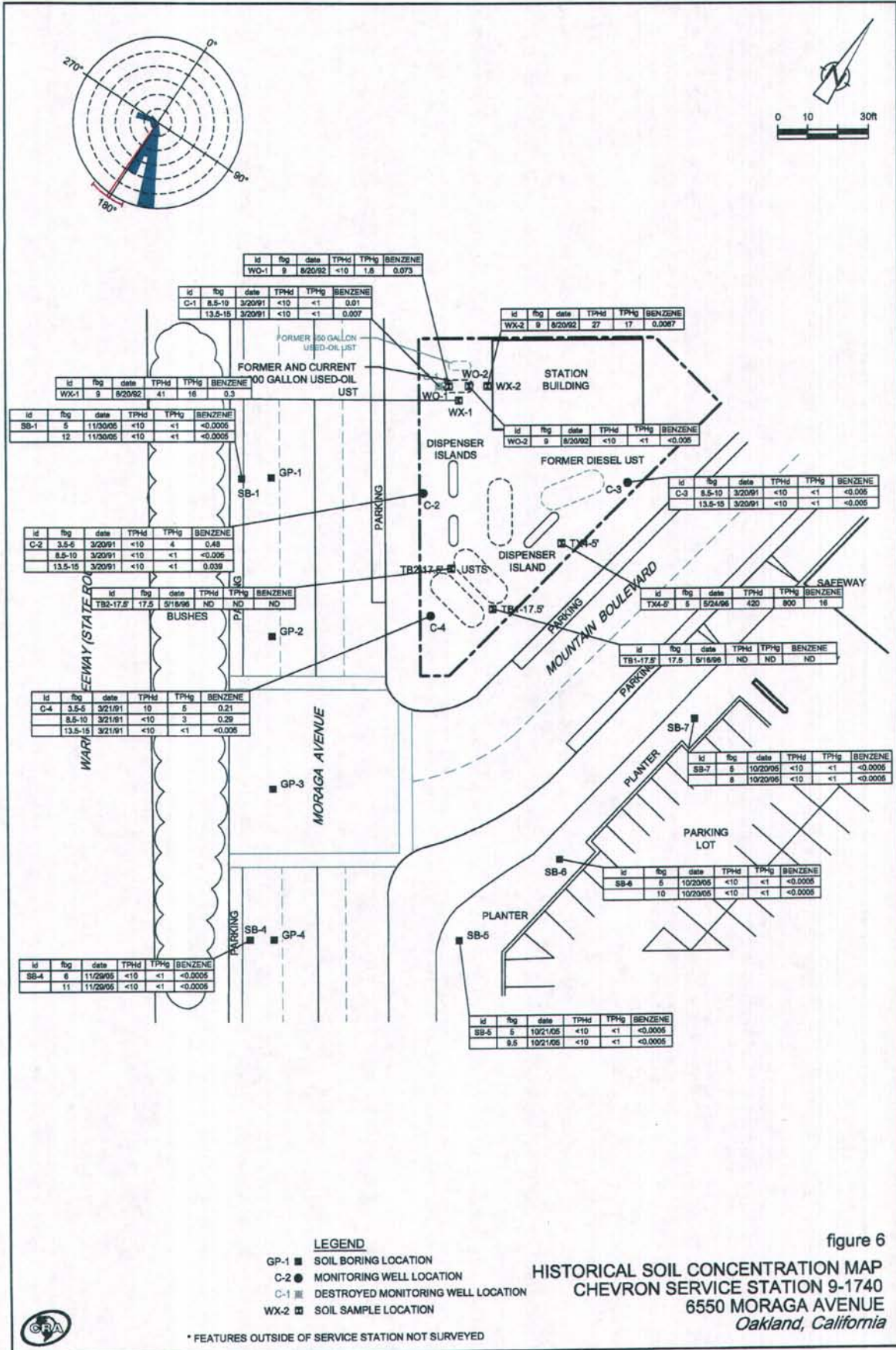


figure 2  
**SITE PLAN**  
**CHEVRON SERVICE STATION 9-1740**  
**6550 MORAGA AVENUE**  
*Oakland, California*





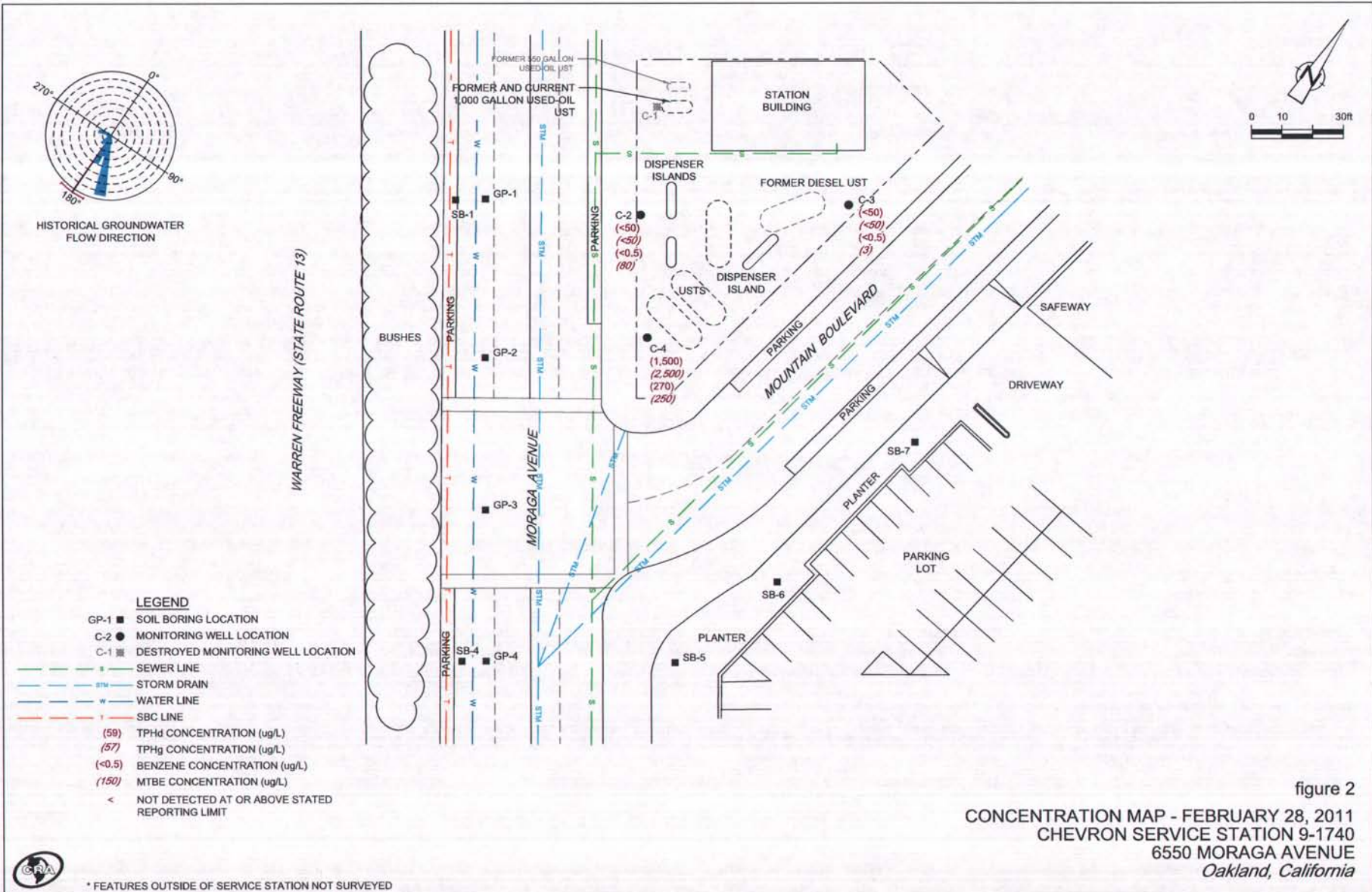
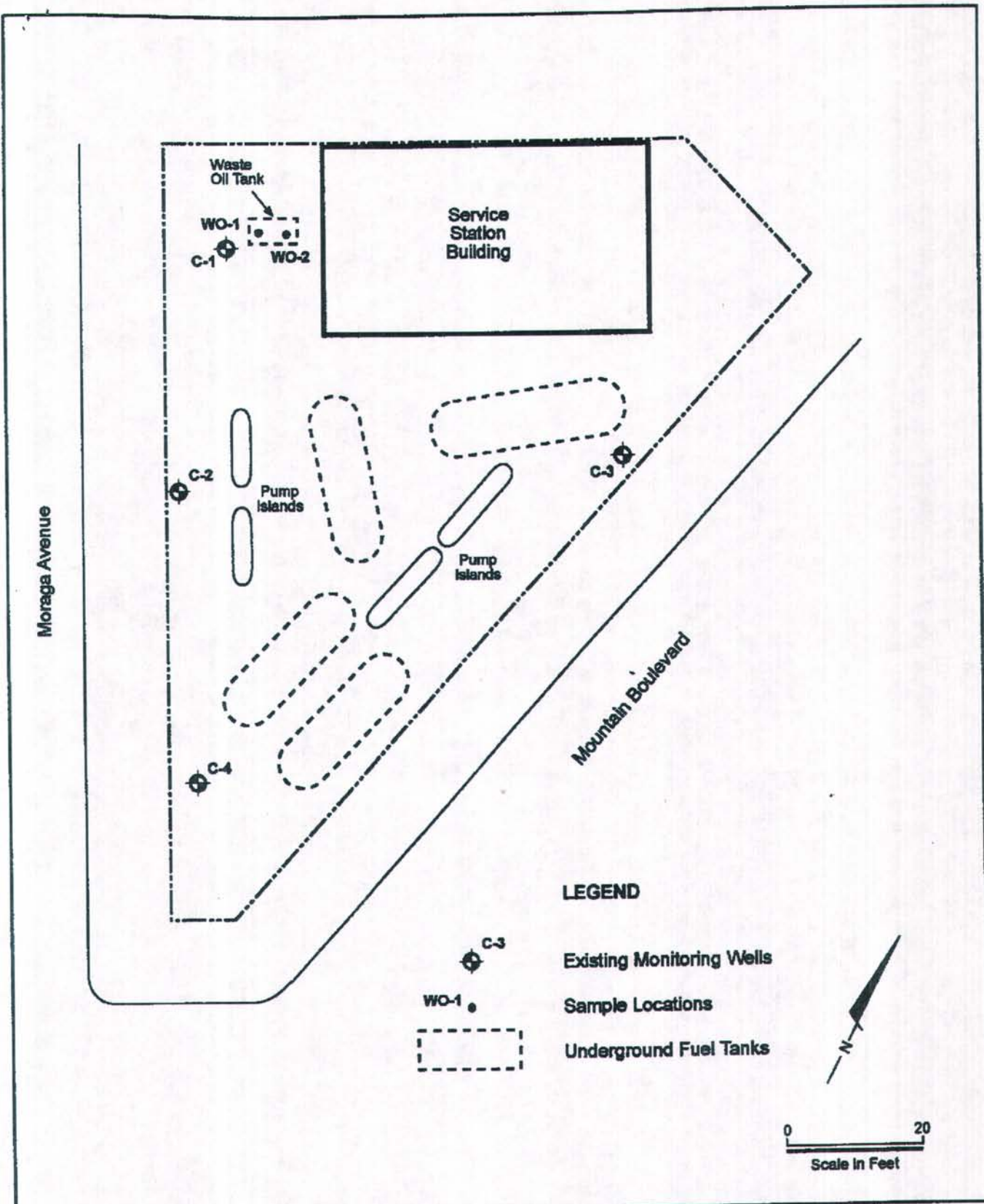


figure 2  
 CONCENTRATION MAP - FEBRUARY 28, 2011  
 CHEVRON SERVICE STATION 9-1740  
 6550 MORAGA AVENUE  
 Oakland, California



\* FEATURES OUTSIDE OF SERVICE STATION NOT SURVEYED





**Touchstone  
Developments**  
Environmental Management

PROJECT NUMBER  
1740-1

Site Plan / Sample Locations  
Former Chevron Station 9-1740  
6550 Moraga Avenue  
Oakland, California

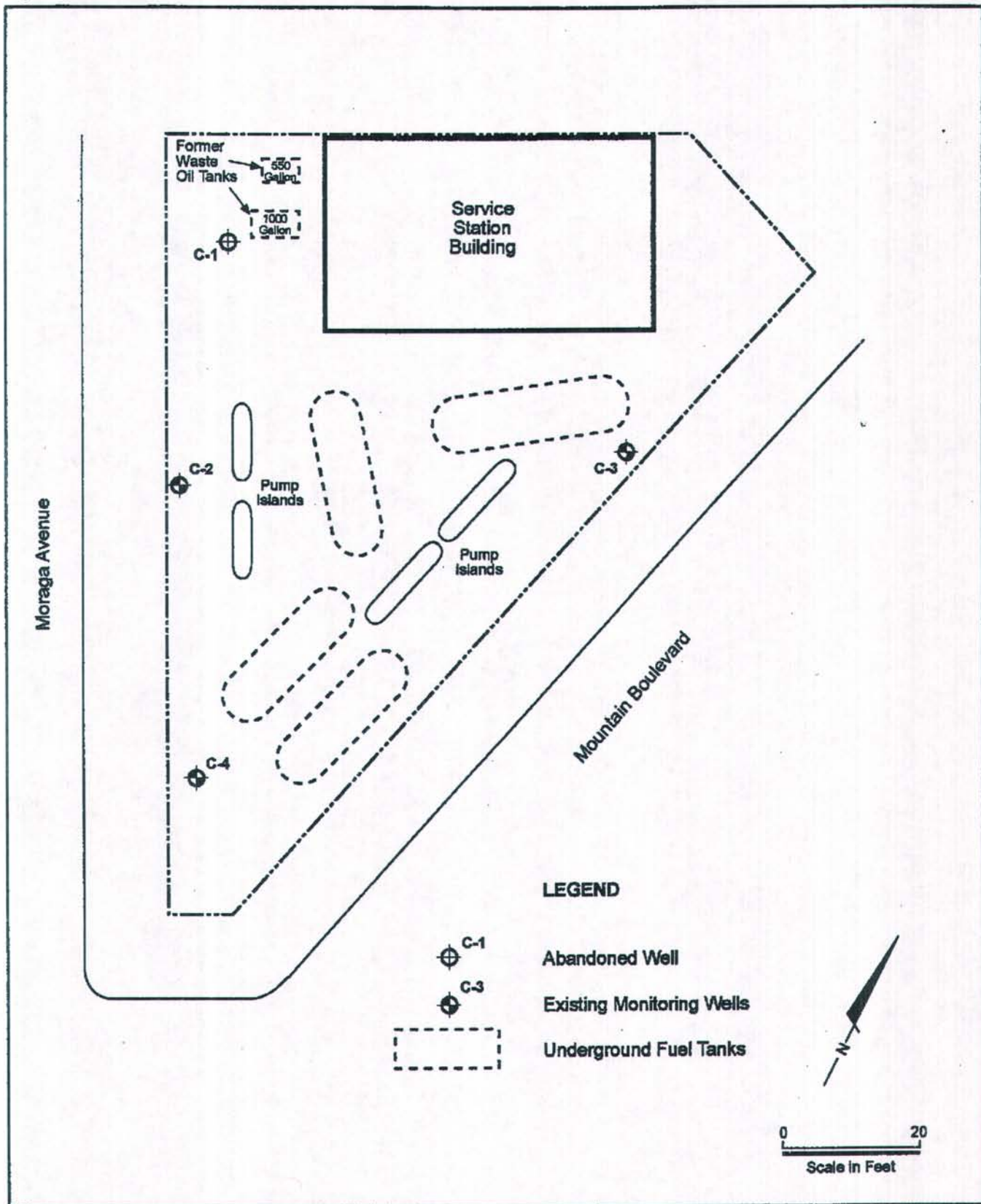
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PM

APPROVED

FIGURE

**2**

DATE  
9/92



**Touchstone  
Developments**  
Environmental Management

PROJECT NUMBER  
1740-2

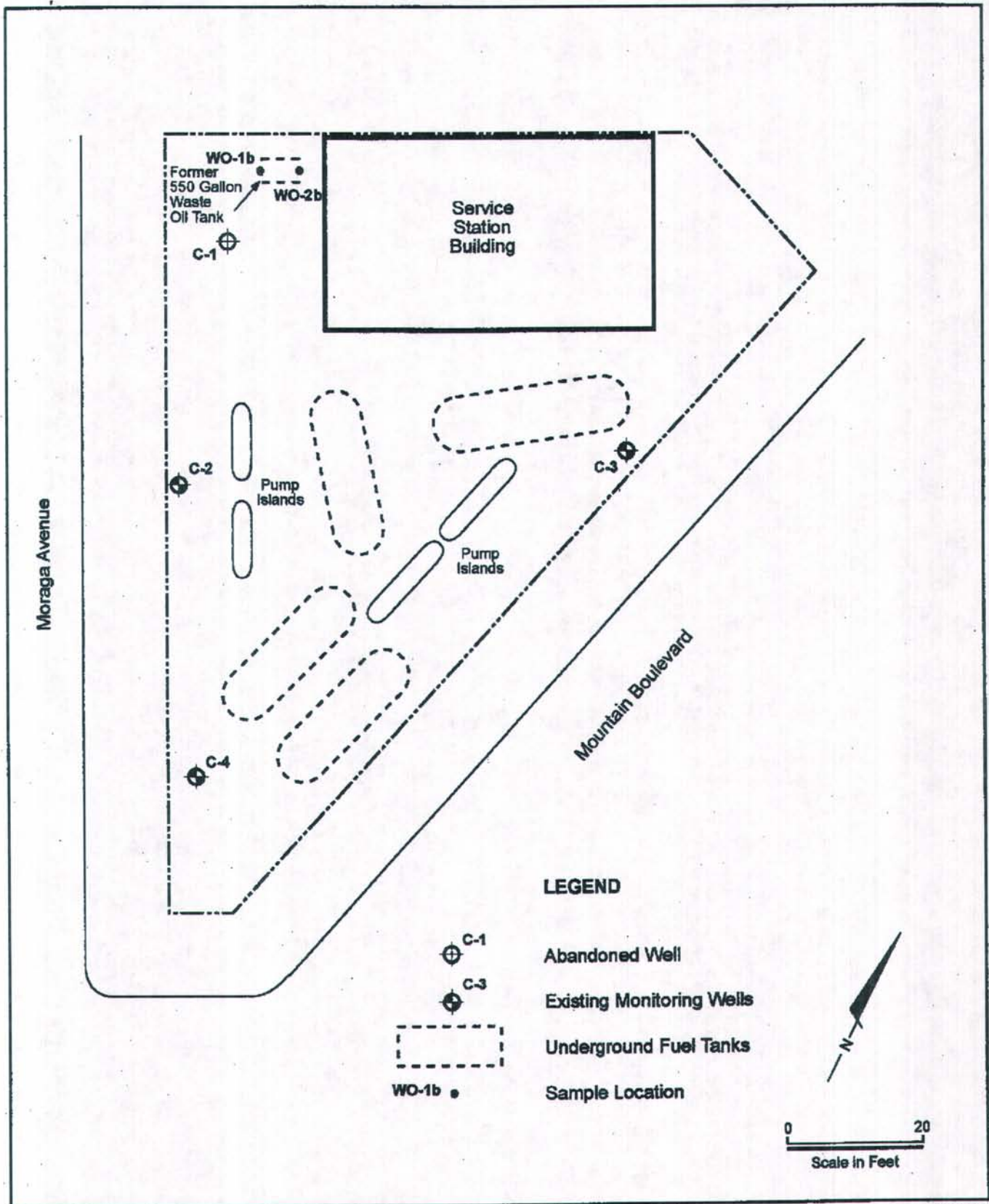
**Site Plan**  
Chevron Station 9-1740  
6550 Moraga Avenue  
Oakland, California

DRAWN APPROVED  
PM

FIGURE

**1**

DATE  
10/92



FIGURE



**Touchstone  
Developments**  
Environmental Management

**Sample Location**  
Chevron Station 9-1740  
6550 Moraga Avenue  
Oakland, California

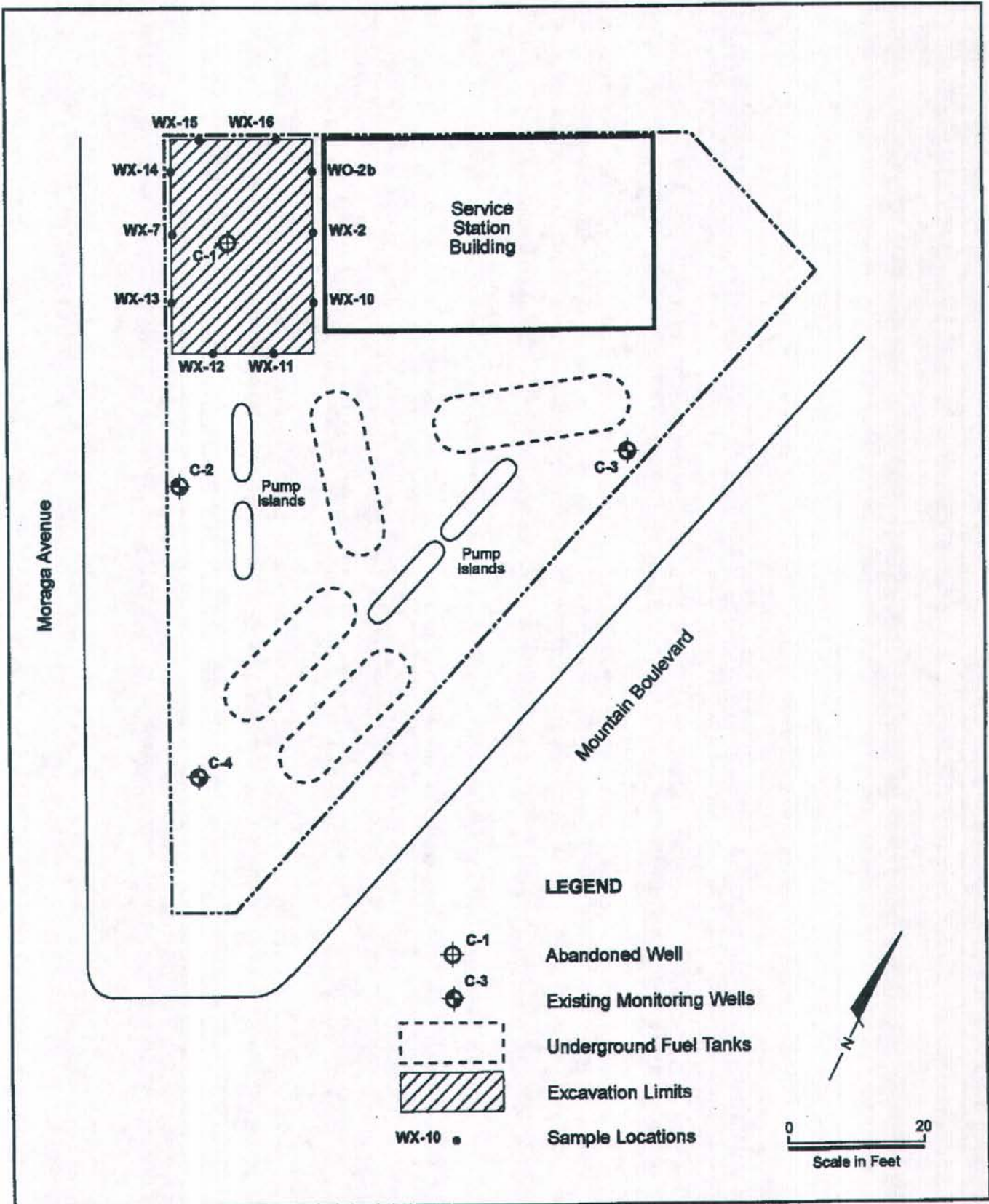
**2**

PROJECT NUMBER  
1740-2

DRAWN  
PM

APPROVED

DATE  
10/92



FIGURE



**Touchstone  
Developments**  
Environmental Management

**Excavation Map**  
Chevron Station 9-1740  
6550 Moraga Avenue  
Oakland, California

**3**

PROJECT NUMBER  
1740-2

DRAWN  
PM

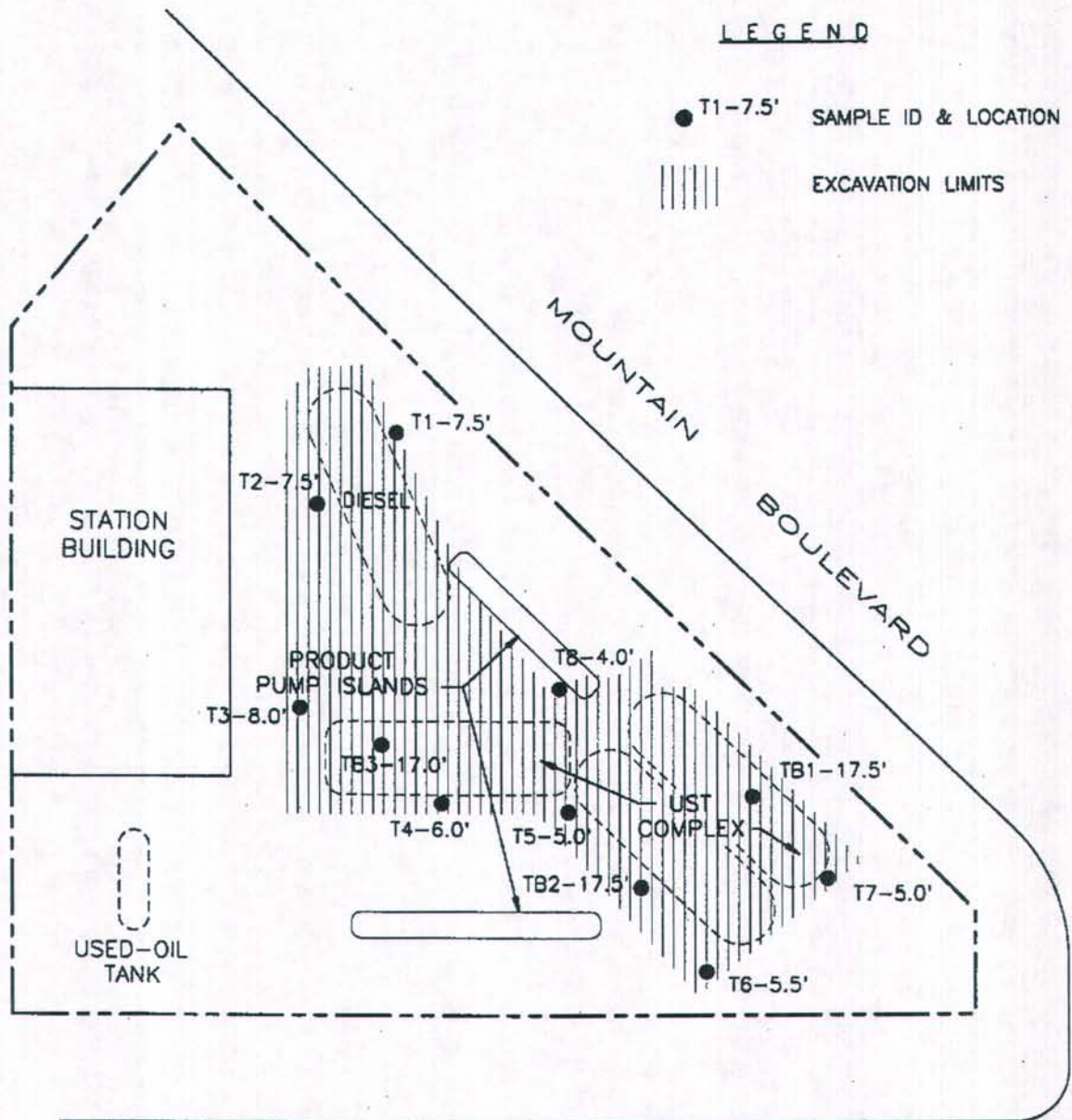
APPROVED

DATE  
10/92

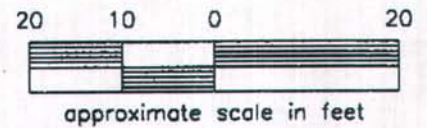
LEGEND

● T1-7.5' SAMPLE ID & LOCATION

||||| EXCAVATION LIMITS



MORAGA AVENUE



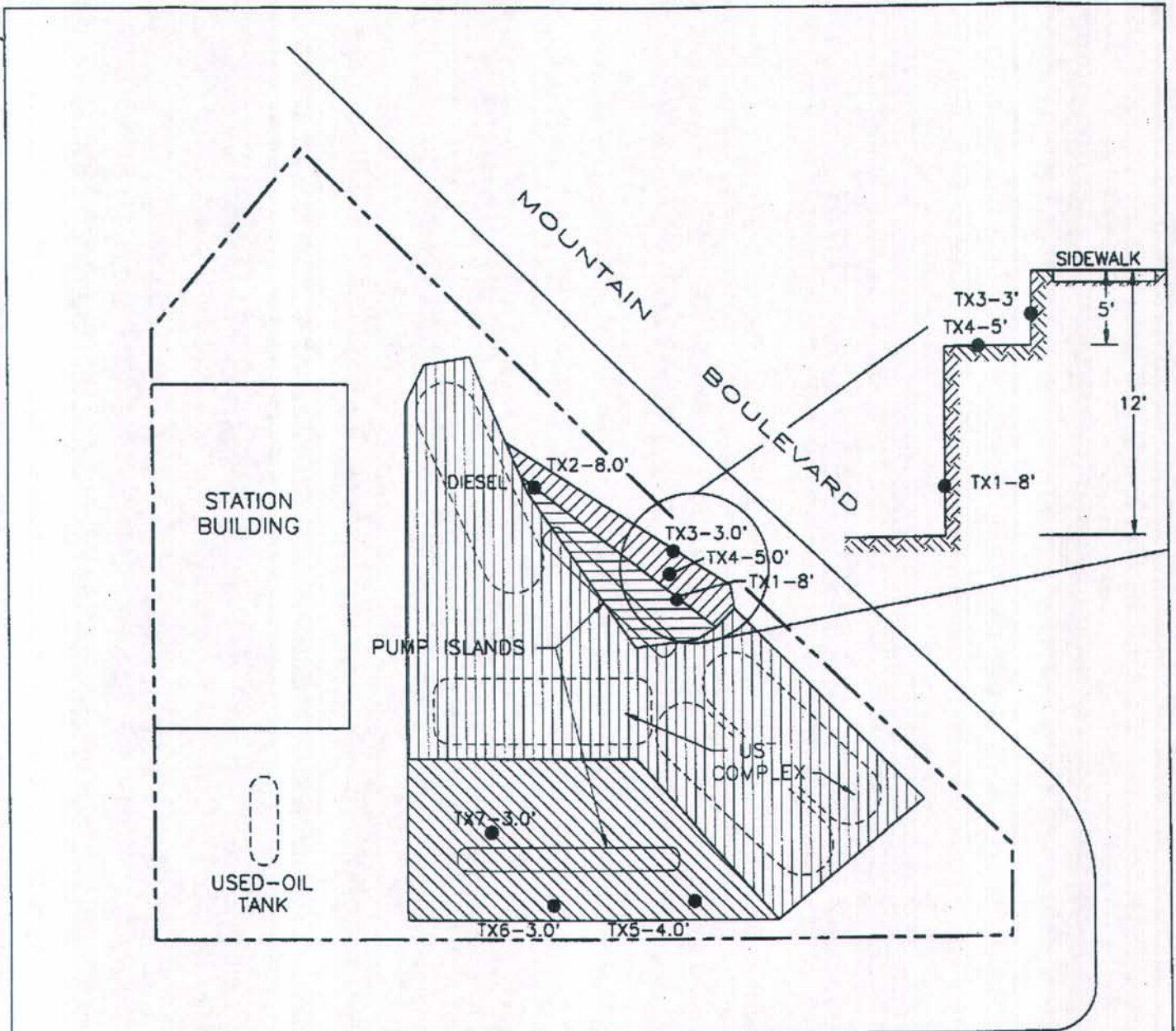
**Touchstone  
Developments**  
Environmental Management

Job. No: 96-1740  
Appr:  
Drwn: CD  
Date: DEC 1996

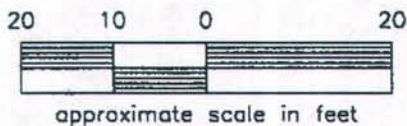
**UST REMOVAL  
SAMPLING MAP**  
Chevron Station No 9-1740  
6550 Moraga Way  
Moraga, California

FIGURE

2



MORAGA AVENUE



**LEGEND**

- TX1 Sample ID and Location
- [Horizontal lines] Excavated to 12 feet; Sampled May 22, 1996
- [Diagonal lines /] Excavated to 5 feet; Sampled May 24, 1996
- [Diagonal lines \] Excavated to 5 feet; Sampled June 26, 1996
- [Vertical lines] Previous Excavation



**Touchstone  
Developments**  
Environmental Management

Job. No: 96-1740  
Appr:  
Drwn: CD  
Date: DEC 1996

**UST & PUMP ISLAND  
OVEREXCAVATION SAMPLE  
LOCATION MAP**  
Chevron Station No 9-1740  
6550 Moraga Way  
Moraga, California

FIGURE

3

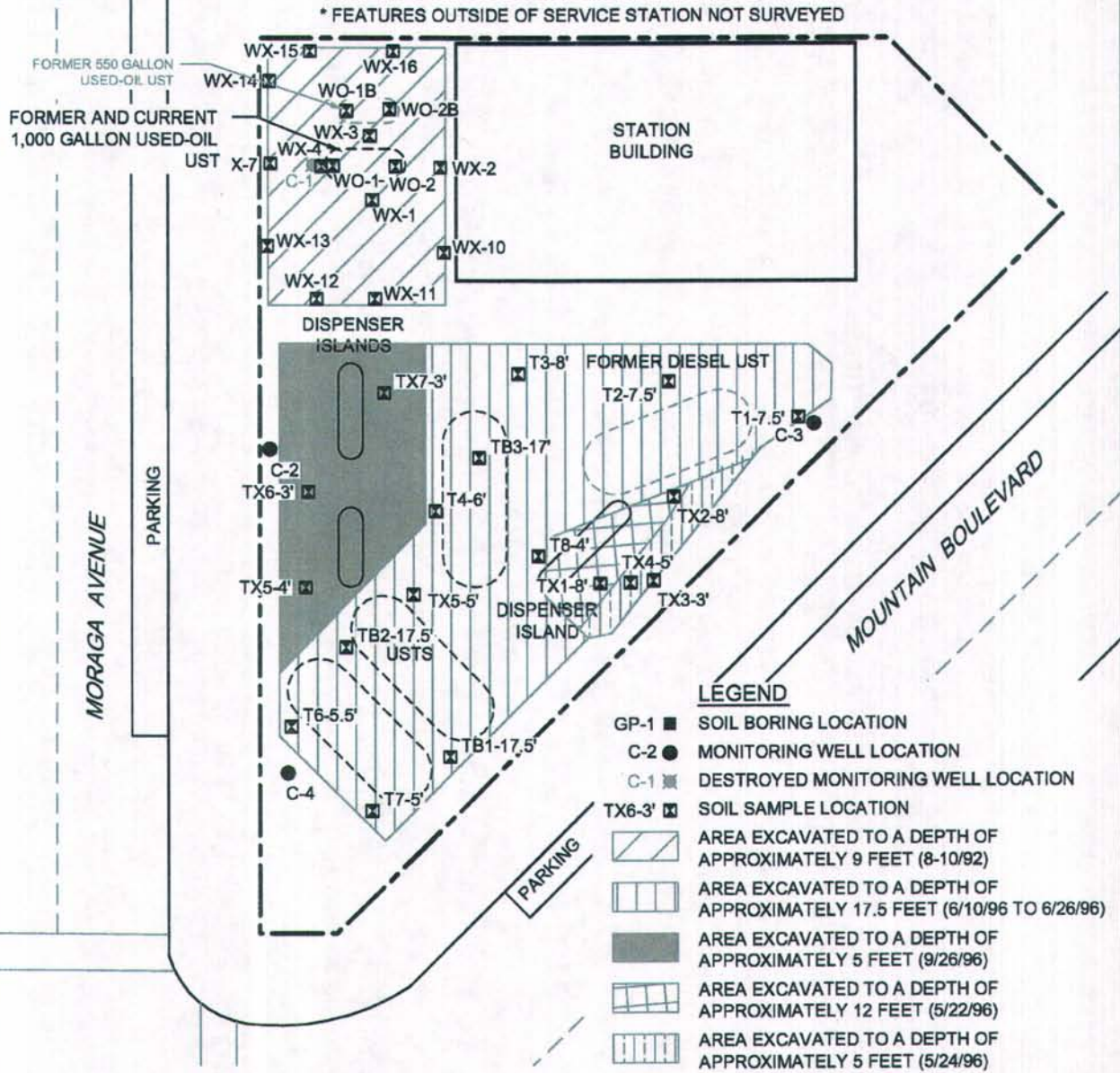
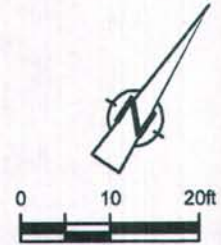
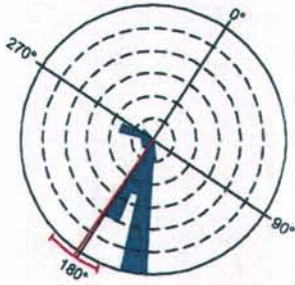


figure 3

**DETAILED SITE PLAN  
CHEVRON SERVICE STATION 9-1740  
6550 MORAGA AVENUE  
Oakland, California**



SOURCE: FIGURE MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN, INC. 001.

**TABLE 1: Analytical Results**

Analytic Results in Parts Per Million (ppm) Unless Noted

**WASTE OIL EXCAVATION SAMPLES**

Sample Number	Sample Depth (ft)	Date Sampled	Laboratory	TPH-Gas	TPH-Diesel	TOG	B	T	E	X	8010	8270	TPH-Oil	Cd	Cr	Pb	Zn	Ni
WO-1b	4.5	10/6/92	West	47	NA	540	0.090	ND	0.73	4.0	ND	ND	NA	ND	79	22	48	86
WO-2b	4.5	10/6/92	West	24	NA	1300	ND	ND	ND	0.31	ND	ND	NA	ND	62	22	65	36
WX-2	5.0	8/20/92	West	17	27	380	0.0087	ND	0.021	0.26	DCB	NA	440	3.9	95	11	55	84
WX-5	4.5	9/15/92	West	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WX-6	4.5	9/15/92	West	NA	NA	2100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WX-7	4.5	9/15/92	West	3.5	ND	ND	0.0056	ND	ND	0.017	DCE/TCE	NA	ND	3.3	100	10	50	76
WX-8	5.0	10/6/92	West	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WX-9	5.0	10/6/92	West	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
WX-10	4.5	10/19/92	West	24	85	550	0.21	ND	ND	0.16	DCE/DCB	NA	1200	ND	93	11	100	47
WX-11	4.5	10/19/92	West	100	ND	420	0.50	ND	0.48	9.1	DCB	NA	340	ND	93	6.8	68	72
WX-12	4.5	10/19/92	West	26	ND	1200	0.18	ND	ND	ND	DCE/DCB	NA	1500	ND	110	13	87	73
WX-13	4.5	10/19/92	West	120	ND	1900	ND	ND	ND	3.5	CB/DCB	NA	2300	ND	85	10	35	55
WX-14	4.5	10/20/92	Superior	ND	14	230	ND	ND	ND	ND	ND	NA	NA	ND	64	7	30	70
WX-15	5.0	10/20/92	Superior	ND	ND	170	ND	ND	ND	ND	ND	NA	NA	ND	55	7	40	70
WX-16	5.0	10/20/92	Superior	ND	ND	170	ND	ND	ND	ND	ND	NA	NA	ND	42	8	50	50

**STOCKPILE SAMPLES**

Sample Number	Date Sampled	Laboratory	8270	418.1 (TRPH)	Sb	As	Ba	Bc	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Ti	V	ZN
WS-1	8/20/92	West	ND	2300	ND	ND	260	1.1	3.5	91	17	180	18	ND	24	63	ND	1.7	ND	68	97

ND = Not Detected at or above the laboratory detection limit  
 ppb = parts per billion  
 TRPH = Total Recoverable Petroleum Hydrocarbons  
 TCLP = Toxicity Characteristic Leachate Procedure  
 TPH-Gas = Total Petroleum Hydrocarbons calculated as gasoline  
 TPH-Diesel = Total Petroleum Hydrocarbons calculated as diesel  
 TOG = Total Oil and Gas  
 DCG = Dichlorobenzene  
 DCE = Dichloroethane

B = Benzene  
 T = Toluene  
 E = Ethylbenzene  
 X = Xylenes  
 Sb = Antimony  
 As = Arsenic  
 Ba = Barium  
 Be = Beryllium  
 Cd = Cadmium  
 Cr = Chromium  
 Co = Cobalt

Cu = Copper  
 Pb = Lead  
 Hg = Mercury  
 Mo = Molybdenum  
 Ni = Nickel  
 Se = Selenium  
 Ag = Silver  
 TI = Thallium  
 V = Vanadium  
 Zn = Zinc



**TABLE C**  
**SOIL STOCKPILE SAMPLING SUMMARY**  
 Chevron Service Station No. 9-1740  
 6550 Moraga Avenue, Oakland, California  
 Results in mg/Kg - parts per million (ppm)

**SOIL STOCKPILE SAMPLING RESULTS**

SAMPLE ID	DATE	TPH-Diesel	TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
SP-1 (A-D)	10-May-96	150	100	ND	ND	ND	3.9	ND
SP-2 (A-D)	10-May-96	55	7.3	0.016	0.02	0.012	0.18	ND
SP-3 (A-D)	10-May-96	61	29	ND	ND	ND	1.1	5.2
SP-4 (A-D)	10-May-96	47	8.1	ND	ND	ND	0.13	ND
SP-5 (A-D)	10-May-96	75	18	ND	ND	ND	0.61	8.4
SP-6 (A-D)	10-May-96	52	32	ND	0.065	0.07	0.87	ND
SP-7 (A-D)	10-May-96	66	20	ND	0.05	0.13	0.12	44
TRSP-1 (A-D)	26-Jun-96	140	170	0.11	0.23	ND	4.2	13

**NOTES:**

TPH-Gasoline = Total Petroleum Hydrocarbons calculated as gasoline.

TPH-Diesel = Total Petroleum Hydrocarbons calculated as diesel.

ND = Not detected at or above the laboratory detection limits.

NA = Not Analyzed

# Conestoga-Rovers & Associates

**Table 1**  
**Historical Soil Analytical Results**  
 Chevron Service Station #9-1740, 6550 Moraga Avenue, Oakland, California

Sample ID	Depth (ftg)	Date Sampled	TPHd	TPHg	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG	1,4-Dichloro benzene	1,2-Dichloro benzene	Acetone	Methylene Chloride	PCE	cis-1,2-DCE	TCE
concentrations in milligrams per kilogram (mg/kg)																		
<b>Monitoring Well Installation Samples</b>																		
C-1	3.5-5	3/20/1991	410	422	--	2	16	5	38	--	770	--	--	--	--	--	--	--
	8.5-10 <sup>a</sup>	3/20/1991	<10	<1	--	0.01	0.021	<0.005	0.034	--	<50	--	--	--	--	--	--	--
	13.5-15	3/20/1991	<10	<1	--	0.007	0.010	<0.005	0.015	--	<50	--	--	--	--	--	--	--
C-2	3.5-5	3/20/1991	<10	4	--	0.48	0.007	0.008	0.021	--	--	--	--	--	--	--	--	--
	8.5-10	3/20/1991	<10	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
	13.5-15	3/20/1991	<10	<1	--	0.039	0.012	0.01	0.049	--	--	--	--	--	--	--	--	--
C-3	8.5-10	3/20/1991	<10	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
	13.5-15	3/20/1991	<10	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
C-4	3.5-5	3/21/1991	10	5	--	0.21	0.016	0.041	0.018	--	--	--	--	--	--	--	--	--
	8.5-10	3/21/1991	<10	3	--	0.29	0.008	0.11	0.029	--	--	--	--	--	--	--	--	--
	13.5-15	3/21/1991	<10	<1	--	<0.005	0.013	<0.005	0.016	--	--	--	--	--	--	--	--	--
<b>Waste Oil Excavation Samples</b>																		
WO-1 <sup>b</sup>	9	8/20/1992	<10	1.6	11	0.0073	<0.005	<0.005	0.0095	--	<50	0.0014	0.0095	--	--	<0.001	<0.005	<0.001
WO-2 <sup>b</sup>	9	8/20/1992	<10	<1	13	<0.005	<0.005	<0.005	<0.005	--	<50	<0.001	<0.001	--	--	<0.001	<0.005	<0.001
WX-1	5	8/20/1992	41	16	580	0.30	0.13	0.31	2.1	--	110	0.0034	0.013	--	--	<0.001	<0.005	<0.001
WX-2	5	8/20/1992	27	17	440	0.0087	<0.005	0.021	0.26	--	380	0.0019	0.0081	--	--	<0.001	<0.005	<0.001
WX-3	5.5	8/20/1992	44	17	740	0.22	0.19	0.40	2.3	--	180	<0.001	0.0067	--	--	<0.001	<0.005	<0.001
WX-4 <sup>c</sup>	5.5	8/20/1992	130	180	2000	<0.50	4	1.9	15	--	3,000	<0.001	<0.001	--	--	0.04	<0.005	0.0036
WX-5	4.5	9/15/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WX-6	4.5	9/15/1992	--	--	--	--	--	--	--	--	2,100	--	--	--	--	--	--	--
WX-7	4.5	9/15/1992	<10	3.5	13	0.0056	<0.005	<0.005	0.017	--	<50	--	--	--	--	--	--	--
WO-1b <sup>d</sup>	4.5	10/6/1992	--	47	--	0.09	<0.05	0.73	4	--	540	--	--	--	--	--	--	--
WO-2b <sup>d</sup>	4.5	10/6/1992	--	24	--	<0.05	<0.05	<0.05	0.31	--	1,300	--	--	--	--	--	--	--
WX-8	5	10/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WX-9	5	10/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WX-10	4.5	10/19/1992	85	24	1200	0.21	ND	ND	0.16	--	550	--	--	--	--	--	--	--
WX-11	4.5	10/19/1992	<10	100	340	0.50	ND	0.48	9.1	--	420	--	--	--	--	--	--	--
WX-12	4.5	10/19/1992	<50	26	1500	0.18	ND	ND	ND	--	1,200	--	--	--	--	--	--	--
WX-13	4.5	10/19/1992	ND	120	2300	<0.5	ND	ND	3.5	--	1,900	--	--	--	--	--	--	--
WX-14	4.5	10/20/1992	14	<1	--	<0.005	ND	ND	ND	--	230	--	--	--	--	--	--	--

# Conestoga-Rovers & Associates

**Table 1**

**Historical Soil Analytical Results**

Chevron Service Station #9-1740, 6550 Moraga Avenue, Oakland, California

Sample ID	Depth (ftg)	Date Sampled	TPHd	TPHg	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG	1,4-Dichloro benzene	1,2-Dichloro benzene	Acetone	Methylene Chloride	PCE	cis-1,2-DCE	TCE
concentrations in milligrams per kilogram (mg/kg)																		
WX-15	5	10/20/1992	<10	<1	--	<0.005	ND	ND	ND	--	170	--	--	--	--	--	--	--
WX-16	5	10/20/1992	<10	<1	--	<0.005	ND	ND	ND	--	170	--	--	--	--	--	--	--
<b>UST Excavation Samples</b>																		
T1-7.5'	7.5	5/10/1996	13	50	--	0.15	ND	0.29	0.13	0.14	--	--	--	--	--	--	--	--
T2-7.5'	7.5	5/10/1996	1.7	ND	--	<0.005	ND	ND	ND	ND	--	--	--	--	--	--	--	--
T3-8.0'	8	5/10/1996	1.1	ND	--	<0.005	ND	ND	ND	ND	--	--	--	--	--	--	--	--
T4-6.0'	6	5/10/1996	1.2	<1.0	--	<0.005	ND	ND	0.0053	1	--	--	--	--	--	--	--	--
T5-5.5'	5.5	5/10/1996	4.6	70	--	0.32	ND	0.37	0.33	0.52	--	--	--	--	--	--	--	--
T6-6.5'	5.5	5/10/1996	140	170	--	0.71	ND	3	1	1.1	--	--	--	--	--	--	--	--
T7-5.0'	5	5/10/1996	90	320	--	1.8	ND	3.5	1.1	2.9	--	--	--	--	--	--	--	--
T8-4.0'	4	5/10/1996	1,200	1,100	--	2.9	14	19	22	ND	--	--	--	--	--	--	--	--
<b>UST Overexcavation Samples</b>																		
TB1-17.5'	17.5	5/16/1996	ND	ND	--	<0.005	ND	ND	0.0052	0.034	--	--	--	--	--	--	--	--
TB2-17.5'	17.5	5/16/1996	ND	ND	--	<0.005	ND	ND	ND	0.051	--	--	--	--	--	--	--	--
TB3-17.0'	17	5/17/1996	1	ND	--	<0.005	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TX1-8.0'	8	5/22/1996	1.1	ND	--	<0.005	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TX2-8.0'	8	5/22/1996	35	8.1	--	<0.005	ND	0.012	0.02	--	--	--	--	--	--	--	--	--
TX3-3.0'	3	5/24/1996	5.6	17	--	0.096	0.075	0.089	0.019	--	--	--	--	--	--	--	--	--
TX4-5.0'	5	5/24/1996	420	800	--	16	5.4	4.2	16	--	--	--	--	--	--	--	--	--
TX5-4.0'	4	6/26/1996	130	160	--	1	0.28	0.63	0.71	ND	--	--	--	--	--	--	--	--
TX6-3.0'	3	6/26/1996	8.4	5.9	--	0.5	0.0059	0.02	0.039	0.67	--	--	--	--	--	--	--	--
TX7-3.0'	3	6/26/1996	200	780	--	3.9	0.73	19	6.5	ND	--	--	--	--	--	--	--	--
<b>Soil Boring Samples</b>																		
SB-1	5	11/30/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
	11.5	11/30/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
SB-4	6	11/29/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
	11	11/29/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
SB-5	5	10/21/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.014	0.003	<0.001	<0.001	<0.001
	9.5	10/21/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.008	0.003	<0.001	<0.001	<0.001
SB-6	5	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.018	0.003	<0.001	<0.001	<0.001
	10	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.008	0.003	<0.001	<0.001	<0.001
SB-7	5	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.008	0.003	0.005	<0.001	<0.001
	8	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.013	0.004	<0.001	0.002	0.003

**Abbreviations:**

TPHd= Total petroleum hydrocarbons as diesel by DRO CA LUFT Method

TCE= Trichloroethene

**Table 1**  
**Historical Soil Analytical Results**  
 Chevron Service Station #9-1740, 6550 Moraga Avenue, Oakland, California

Sample ID	Depth (ftg)	Date Sampled	TPHd	TPHg	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG	1,4-Dichloro benzene	1,2-Dichloro benzene	Acetone	Methylene Chloride	PCE	cis-1,2-DCE	TCE
-----------	-------------	--------------	------	------	-------	---------	---------	--------------	---------	------	-----	----------------------	----------------------	---------	--------------------	-----	-------------	-----

concentrations in milligrams per kilogram (mg/kg)

TPHg = Total petroleum hydrocarbons as gasoline by N. CA LUFT Gasoline Method  
 BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B  
 MTBE = Methyl tertiary butyl ether by EPA Method 8260B  
 PCE=Tetrachloroethene  
 a = VOCs not detected  
 b = Semi-VOCs not detected  
 c = 1,1-DCA and 1,1,1-TCA detected at 0.27 mg/kg and 0.011 mg/kg, respectively  
 d = Semi-VOCs and HVOCs not detected

cis-1,2-DCE= cis-1,2-dichloroethene  
 VOC full scan by EPA Method 8260B  
 \*Data reported only for VOCs with detections above laboratory limits, all others were non-detect  
 <x = below laboratory detection limits

→ STRIKE-OUT = SUBSEQUENTLY Removed

Conestoga-Rovers & Associates

Table 1  
 Historical Soil Analytical Results  
 Chevron Service Station #9-1740, 6550 Moraga Avenue, Oakland, California

Sample ID	Depth (ftg)	Date Sampled	TPHd	TPHg	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG	1,4-Dichloro benzene	1,2-Dichloro benzene	Acetone	Methylene Chloride	PCE	cis-1,2-DCE	TCE
concentrations in milligrams per kilogram (mg/kg)																		
<b>Monitoring Well Installation Samples</b>																		
C-1	3.5-5	3/20/1991	410	422	--	2	16	5	38	--	770	--	--	--	--	--	--	--
	8.5-10	3/20/1991	<10	<1	--	0.01	0.021	<0.005	0.034	--	<50	--	--	--	--	--	--	--
	13.5-15	3/20/1991	<10	<1	--	0.007	0.010	<0.005	0.015	--	<50	--	--	--	--	--	--	--
C-2	3.5-5	3/20/1991	<10	4	--	0.48	0.007	0.008	0.021	--	--	--	--	--	--	--	--	--
	8.5-10	3/20/1991	<10	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
	13.5-15	3/20/1991	<10	<1	--	0.039	0.012	0.01	0.049	--	--	--	--	--	--	--	--	--
C-3	8.5-10	3/20/1991	<10	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
	13.5-15	3/20/1991	<10	<1	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
C-4	3.5-5	3/21/1991	10	5	--	0.21	0.016	0.041	0.018	--	--	--	--	--	--	--	--	--
	8.5-10	3/21/1991	<10	3	--	0.29	0.008	0.11	0.029	--	--	--	--	--	--	--	--	--
	13.5-15	3/21/1991	<10	<1	--	<0.005	0.013	<0.005	0.016	--	--	--	--	--	--	--	--	--
<b>Waste Oil Excavation Samples</b>																		
WO-1	9	8/20/1992	<10	1.6	11	0.073	<0.005	<0.005	0.0095	--	<50	0.0014	0.0095	--	--	<0.001	<0.005	<0.001
WO-2	9	8/20/1992	<10	<1	13	<0.005	<0.005	<0.005	<0.005	--	<50	<0.001	<0.001	--	--	<0.001	<0.005	<0.001
WX-1	9	8/20/1992	41	16	580	0.30	0.13	0.31	2.1	--	110	0.0034	0.013	--	--	<0.001	<0.005	<0.001
WX-2	5	8/20/1992	37	17		0.0087	<0.005	0.021	0.26	--	380	0.0019	0.0081	--	--	<0.001	<0.005	<0.001
	9	8/20/1992	27	17	440	0.0087	<0.005	0.021	0.26	--	380	--	--	--	--	<0.001	<0.005	<0.001
WX-3	5.5	8/20/1992	44	17	740	0.22	0.19	0.40	2.3	--	180	<0.001	0.0067	--	--	<0.001	<0.005	<0.001
WX-4	5.5	8/20/1992	130	180	2000	<0.50	4	1.9	16	--	3,000	<0.001	<0.001	--	--	0.04	<0.005	0.0036
WX-5	4.5	9/15/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WX-6	4.5	9/15/1992	--	--	--	--	--	--	--	--	2,100	--	--	--	--	--	--	--
WX-7	4.5	9/15/1992	ND	4	--	0.0056	ND	ND	0.017	--	ND	--	--	--	--	--	--	--
WO-1b	4.5	10/6/1992	--	47	--	0.09	ND	0.73	4	--	540	--	--	--	--	--	--	--
WO-2b	4.5	10/6/1992	--	24	--	ND	ND	ND	0.31	--	1,300	--	--	--	--	--	--	--
WX-8	5	10/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WX-9	5	10/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WX-10	4.5	10/19/1992	86	24	--	0.21	ND	ND	0.16	--	550	--	--	--	--	--	--	--
WX-11	4.5	10/19/1992	ND	100	--	0.50	ND	0.48	9.1	--	430	--	--	--	--	--	--	--
WX-12	4.5	10/19/1992	ND	26	--	0.18	ND	ND	ND	--	1,200	--	--	--	--	--	--	--
WX-13	4.5	10/19/1992	ND	120	--	ND	ND	ND	2.5	--	1,900	--	--	--	--	--	--	--
WX-14	4.5	10/20/1992	14	ND	--	ND	ND	ND	ND	--	230	--	--	--	--	--	--	--
WX-15	5	10/20/1992	ND	ND	--	ND	ND	ND	ND	--	170	--	--	--	--	--	--	--
WX-16	5	10/20/1992	ND	ND	--	ND	ND	ND	ND	--	170	--	--	--	--	--	--	--

# Conestoga-Rovers & Associates

**Table 1**  
**Historical Soil Analytical Results**  
 Chevron Service Station #9-1740, 6550 Moraga Avenue, Oakland, California

Sample ID	Depth (fsg)	Date Sampled	TPHd	TPHg	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG	1,4-Dichloro benzene	1,2-Dichloro benzene	Acetone	Methylene Chloride	PCE	cis-1,2-DCE	TCE
concentrations in milligrams per kilogram (mg/kg)																		
<b>UST Excavation Samples</b>																		
TX1-7.5'	7.5	5/10/1996	13	50	--	0.15	ND	0.29	0.13	0.14	--	--	--	--	--	--	--	--
TX2-7.5'	7.5	5/10/1996	1.7	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TX3-8.0'	8	5/10/1996	1.1	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TX4-6.0'	6	5/10/1996	1.2	ND	--	ND	ND	ND	0.0053	↓	--	--	--	--	--	--	--	--
TX5-5.5'	5.5	5/10/1996	4.6	70	--	0.32	ND	0.37	0.33	0.52	--	--	--	--	--	--	--	--
TX6-6.5'	5.5	5/10/1996	140	170	--	0.71	ND	3	↓	1.1	--	--	--	--	--	--	--	--
TX7-5.0'	5	5/10/1996	90	320	--	1.8	ND	3.5	1.1	2.9	--	--	--	--	--	--	--	--
TX8-4.0'	4	5/10/1996	1,200	1,100	--	2.9	14	19	22	ND	--	--	--	--	--	--	--	--
<b>UST Overexcavation Samples</b>																		
TB1-17.5'	17.5	5/16/1996	ND	ND	--	ND	ND	ND	0.0052	0.034	--	--	--	--	--	--	--	--
TB2-17.5'	17.5	5/16/1996	ND	ND	--	ND	ND	ND	ND	0.051	--	--	--	--	--	--	--	--
TB3-17.0'	17	5/17/1996	↓	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TX1-8.0'	8	5/22/1996	1.1	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TX2-8.0'	8	5/22/1996	35	8.1	--	ND	ND	0.013	0.02	--	--	--	--	--	--	--	--	--
TX3-3.0'	3	5/24/1996	5.6	17	--	0.096	0.075	0.089	0.019	--	--	--	--	--	--	--	--	--
TX4-5.0'	5	5/24/1996	420	800	--	16	5.4	4.2	16	--	--	--	--	--	--	--	--	--
TX5-4.0'	4	6/26/1996	130	160	--	↓	0.28	0.63	0.71	ND	--	--	--	--	--	--	--	--
TX6-3.0'	3	6/26/1996	8.4	8.9	--	0.5	0.0059	0.02	0.039	0.67	--	--	--	--	--	--	--	--
TX7-3.0'	3	6/26/1996	200	780	--	3.9	0.73	19	6.5	ND	--	--	--	--	--	--	--	--
<b>Stockpile Samples</b>																		
SP-1		5/10/1996	150	100	--	ND	ND	ND	3.9	--	--	--	--	--	--	--	--	--
SP-2		5/10/1996	55	7	--	0.016	0.02	0.012	0.18	--	--	--	--	--	--	--	--	--
SP-3		5/10/1996	61	29	--	ND	ND	ND	1.1	--	--	--	--	--	--	--	--	--
SP-4		5/10/1996	47	8	--	ND	ND	ND	0.13	--	--	--	--	--	--	--	--	--
SP-5		5/10/1996	75	18	--	ND	ND	ND	0.61	--	--	--	--	--	--	--	--	--
SP-6		5/10/1996	52	32	--	ND	0.065	0.07	0.87	--	--	--	--	--	--	--	--	--
SP-7		5/10/1996	66	20	--	ND	0.05	0.13	0.12	--	--	--	--	--	--	--	--	--
TRSP-1		6/26/1996	140	170	--	0.11	0.23	ND	4.2	--	--	--	--	--	--	--	--	--
<b>Soil Boring Samples</b>																		
SB-1	5	11/30/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
	11.5	11/30/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
SB-4	6	11/29/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
	11	11/29/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	<0.007	<0.002	<0.001	<0.001	<0.001
SB-5	5	10/21/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.014	0.003	<0.001	<0.001	<0.001
	9.5	10/21/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.008	0.003	<0.001	<0.001	<0.001
SB-6	5	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.018	0.003	<0.001	<0.001	<0.001
	10	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.008	0.003	<0.001	<0.001	<0.001

## Conestoga-Rovers & Associates

**Table 1**  
**Historical Soil Analytical Results**  
 Chevron Service Station #9-1740, 6550 Moraga Avenue, Oakland, California

Sample ID	Depth (ftg)	Date Sampled	TPHd	TPHg	TPHm	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG	1,4-Dichloro benzene	1,2-Dichloro benzene	Acetone	Methylene Chloride	PCE	cis-1,2-DCE	TCE
concentrations in milligrams per kilogram (mg/kg)																		
SB-7	5	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.008	0.003	0.005	<0.001	<0.001
	8	10/20/05	<10	<1	--	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--	--	0.013	0.004	<0.001	0.002	0.003

**Abbreviations:**

TPHd= Total petroleum hydrocarbons as diesel by DRO CA LUFT Method

TPHg = Total petroleum hydrocarbons as gasoline by N. CA LUFT Gasoline Method

BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B

MTBE = Methyl tertiary butyl ether by EPA Method 8260B

PCE=Tetrachloroethene

TCE= Trichloroethene

cis-1,2-DCE= cis-1,2-dichloroethene

VOC full scan by EPA Method 8260B

\*Data reported only for VOCs with detections above laboratory limits, all others were non-detect

ftg = Feet below grade

<x = below laboratory detection limits

**TABLE A**  
**SOIL AND GROUNDWATER SAMPLING SUMMARY**  
**Chevron Service Station No. 9-1740**  
**6550 Moraga Avenue, Oakland, California**  
 Results in mg/Kg - parts per million (ppm), unless otherwise noted

**UST EXCAVATION GROUNDWATER SAMPLING RESULTS**

SAMPLE ID	DATE	TPH-Diesel (ppb)	TPH-Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-Benzene (ppb)	Xylenes (ppb)	EPA 8240 (ppb)	CAM 17 TTLC (ppm)
BFH20	9-Apr-96	3,500	6,000	25	36	ND	ND	ND*	Ba 1.5 Cu 0.045 Zn 0.054

**NOTES:**

- Sample BFH20 was collected from an onsite UST backfill well.
- TPH-Diesel = Total Petroleum Hydrocarbons calculated as diesel.
- TPH-Gasoline = Total Petroleum Hydrocarbons calculated as gasoline.
- MTBE = Methyl t-Butyl Ether
- ND = Not detected at or above the laboratory detection limits.
- NA = Not Analyzed.
- ppb = Parts per Billion, results reported in ug/L by the laboratory.
- ppm = Parts per Million, results reported in mg/Kg by the laboratory.
- CAM 17 = TTLC extraction of 17 metals. Detectable parameters listed. See CAR for complete list of parameters.
- \* EPA 8240 = All analytes reported as ND. See CAR for list of parameters.



# Conestoga-Rovers & Associates

**Table 2**  
**Grab-groundwater Analytical Results**  
 Chevron Service Station #9-1740, 6550 Moraga Avenue, Oakland, California

Sample ID	Depth (fbg)	Date Sampled	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Acetone	Methylene Chloride	PCE	cis-1,2-DCE	TCE	TAME	Chloroform
Concentrations in micrograms per liter (µg/L)																
BFH20		4/9/1996	3,500	6,000	25	36	ND	ND	--	--	--	--	--	--	--	--
SB-5	10	10/21/2005	<150	<50	<0.5	<0.5	<0.5	<0.5	2	<6	<2	<0.8	3	<1	<0.5	<0.8
SB-6	10	10/20/2005	430	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<6	<2	<0.8	<0.8	<1	<0.5	<0.8
SB-7	10	10/20/2005	530	<50	<0.5	<0.5	<0.5	<0.5	4	<6	<2	1	16	13	0.5	<0.8
GP-1	10	4/21/2006	220	110	<0.5	1.3	<0.5	0.52 [1]	<0.5	--	<5.0	<0.50	<0.50	<0.50	--	0.57
GP-2	10	4/21/2006	280	<50	<0.5	0.82	<0.5	<1.0	<0.5	--	<5.0	<0.50	<0.50	<0.50	--	<0.5
GP-3	10	4/21/2006	980	<50	<0.5	0.68	<0.5	<1.0	<0.5	--	<5.0	<0.50	<0.50	<0.50	--	<0.5
GP-4	10	4/21/2006	2,800	<50	<0.5	0.55	<0.5	<1.0	<0.5	--	<5.0	<0.50	<0.50	<0.50	--	<0.5
C-4		3/15/2008	<1,000	--	<10	<10	<10	<30	<10	--	--	--	--	--	--	--

**Abbreviations:**

TPHd= Total petroleum hydrocarbons as diesel by DRO CA LUFT Method  
 TPHg = Total petroleum hydrocarbons as gasoline by N. CA LUFT Gasoline Method  
 BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B  
 MTBE = Methyl tertiary butyl ether by EPA Method 8260B  
 PCE=Tetrachloroethene  
 TCE= Trichloroethene  
 cis-1,2-DCE= cis-1,2-dichloroethene  
 TAME=tert amyl methyl ether  
 VOC full scan by EPA Method 8260B  
 \*Data reported only for VOCs with detections above laboratory limits, all others were non-detect  
 [1]=o-xylene, p,m-xylene < 1.0 µg/l  
 -- = Not Analyzed  
 fbg = Feet below grade  
 <x = below laboratory detection limits

## Conestoga-Rovers & Associates

Table 3

**Total Aromatic Extractable Petroleum Hydrocarbons as Diesel Results**  
Chevron Service Station 9-1740, 6550 Moraga Avenue, Oakland, CA

Well ID	Sample Date	Total Petroleum Hydrocarbons	Total Petroleum Aromatic	Aromatic > C5-C7	Aromatic > C7-C8	Aromatic > C8-C10	Aromatic > C10-C12	Aromatic > C12-C16	Aromatic > C16-C21	Aromatic > C21-C35
Concentrations reported in micrograms per liter (µg/L)										
C-4	3/15/08	5,000	2000	<50	90	53	200	440	810	450

**Total Aliphatic Extractable Petroleum Hydrocarbons as Diesel Results**

Well ID	Sample Date	Total Petroleum Hydrocarbons	Total Petroleum Aliphatic	Aliphatics > C5-C6	Aliphatics > C6-C8	Aliphatics > C8-C10	Aliphatics > C10-C12	Aliphatics > C12-C16	Aliphatics > C16-C35
Concentrations reported in micrograms per liter (µg/L)									
C-4	3/15/08	5,000	3,000	<50	<50	79	50	1,000	1,900

**Abbreviations/Notes:**

<x = Not detected above the laboratory detection limit.  
Aromatics and Aliphatics analyzed by EPA Method 8015C.

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTRE (µg/L)
<b>C-2</b>											
03/25/91	594.57	571.68	22.89	--	--	<50	1.0	<0.5	<0.5	2.0	--
07/01/91	594.57	587.20	7.37	--	--	660	190	2.5	28	22	--
09/25/91	594.57	587.59	6.98	--	--	110	200	1.9	21	1.7	--
12/23/91	594.57	589.56	5.01	--	--	<50	1.2	1.2	<0.5	1.8	--
03/24/92	594.57	577.30	17.27	--	--	100	5.9	7.9	4.0	14	--
06/23/92	594.57	590.75	3.82	--	--	190	45	4.5	9.5	10	--
09/30/92	594.57	580.56	14.01	--	--	240	99	2.3	11	6.1	--
12/16/92	594.57	580.05	14.52	--	--	280	160	6.2	7.4	5.0	--
03/30/93	594.57	583.49	11.08	--	--	110	21	<0.5	0.8	<1.5	--
06/10/93	594.57	583.08	11.49	--	--	180	53	2.6	8.0	5.8	--
09/02/93	594.57	580.49	14.08	--	--	51	18	0.8	4.4	<1.5	--
12/06/93	594.57	579.87	14.70	--	--	<50	20	1.3	2.7	<0.5	--
03/02/94	594.57	579.70	14.87	--	--	<50	9.9	1.6	<0.5	0.8	--
06/03/94	594.57	579.35	15.22	--	--	440	300	2.7	61	2.1	--
09/07/94	594.57	587.27	7.30	--	--	80	30	<0.5	1.6	<0.5	--
12/06/94	594.57	589.29	5.28	--	--	120	51	<0.5	4.7	<0.5	--
03/31/95	594.57	589.13	5.44	--	--	770	250	<5.0	74	<5.0	--
06/15/95	594.57	589.62	4.95	--	--	240	76	<1.0	26	<1.0	--
09/25/95	594.57	587.78	6.79	--	--	<50	1.2	<0.5	<0.5	<0.5	--
12/19/95	594.57	588.94	5.63	--	--	<250	23	<2.5	<2.5	<2.5	860
03/31/97	594.57	589.74	4.83	--	--	<500	48	<5.0	<5.0	<5.0	2,900
06/23/97	594.57	589.98	4.59	--	--	1200	240	<10	<10	<10	4,900
09/02/97	594.57	590.02	4.55	--	--	1400	340	<5.0	54	6.9	2,500
12/15/97	594.57	590.26	4.31	--	--	540	100	<2.5	8.7	<2.5	2,400
03/10/98	594.57	590.00	4.57	--	--	<500	<5.0	<5.0	<5.0	<5.0	3,000
06/16/98	594.57	589.99	4.58	--	--	120	6.6	<1.0	<1.0	<1.0	2,500
08/25/98	594.57	589.67	4.90	--	--	140	<0.5	<0.5	<0.5	<0.5	2,600
12/29/98	594.57	589.77	4.80	--	--	1830	17.7	<10.0	<10.0	14.9	4,600/4,890 <sup>1</sup>
03/09/99	594.57	590.21	4.36	--	--	120	16	<1.0	<1.0	<1.0	3,400
06/23/99 <sup>2</sup>	594.57	589.92	4.65	--	--	--	--	--	--	--	--
09/28/99	594.57	585.99	8.58	--	--	<50	<0.5	<0.5	<0.5	<0.5	1,250
02/29/00	594.57	586.59	7.98	--	--	122	<0.5	<0.5	<0.5	<0.5	249
08/29/00	594.57	587.52	7.05	0.00	--	<50	<0.50	<0.50	<0.50	<0.50	390
03/27/01	594.57	587.73	6.84	0.00	--	<50.0	<0.500	<0.500	<0.500	<0.500	9.72
09/05/01 <sup>4</sup>	594.57	587.37	7.20	0.00	58 <sup>5</sup>	360	<0.50	<0.50	<0.50	<1.5	1,300/1,000 <sup>1</sup>
03/04/02 <sup>4</sup>	594.57	587.59	6.98	0.00	270 <sup>6</sup>	190	<0.50	<0.50	<0.50	<1.5	440

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>C-2 (cont)</b>											
09/03/02 <sup>4</sup>	594.57	587.29	7.28	0.00	760 <sup>6</sup>	120	<0.50	<0.50	<0.50	<1.5	290
03/29/03 <sup>4</sup>	594.57	588.06	6.51	0.00	<50 <sup>6</sup>	53	<0.5	<0.5	<0.5	<1.5	73
09/23/03 <sup>4,7</sup>	594.57	587.71	6.86	0.00	64 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	12
03/17/04 <sup>7,8</sup>	594.57	587.35	7.22	0.00	<50 <sup>6</sup>	82	<0.5	<0.5	<0.5	<0.5	370
09/13/04 <sup>7</sup>	594.57	589.16	5.41	0.00	<50 <sup>6</sup>	67	<0.5	<0.5	<0.5	<0.5	530
03/11/05 <sup>7</sup>	594.57	589.84	4.73	0.00	84 <sup>6</sup>	110	<0.5	<0.5	<0.5	<0.5	580
09/29/05 <sup>7</sup>	594.57	589.01	5.56	0.00	82 <sup>6,9</sup>	61	<0.5	<0.5	<0.5	<0.5	320
03/20/06 <sup>7</sup>	594.57	590.15	4.42	0.00	120 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	500
08/25/06 <sup>7</sup>	594.57	589.06	5.51	0.00	130 <sup>6</sup>	93	<0.5	<0.5	<0.5	<0.5	460
03/12/07 <sup>7</sup>	594.57	589.66	4.91	0.00	-- <sup>10</sup>	<50	<0.5	<0.5	<0.5	<0.5	110
03/21/07	594.57	589.85	4.72	0.00	220 <sup>6</sup>	--	--	--	--	--	--
09/21/07 <sup>7</sup>	594.57	588.93	5.64	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	180
03/10/08 <sup>7</sup>	594.57	589.76	4.81	0.00	<50 <sup>6</sup>	73	<0.5	<0.5	<0.5	<0.5	170
09/15/08 <sup>7</sup>	594.57	588.61	5.96	0.00	59 <sup>6</sup>	57	<0.5	<0.5	<0.5	<0.5	150
03/03/09 <sup>7</sup>	594.57	589.92	4.65	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	54
08/31/09 <sup>7</sup>	594.57	588.66	5.91	0.00	<50 <sup>6</sup>	89	<0.5	<0.5	<0.5	<0.5	240
03/24/10 <sup>7</sup>	594.57	590.04	4.53	0.00	62 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	50
02/28/11 <sup>7</sup>	594.57	590.09	4.48	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	80
<b>C-3</b>											
03/25/91	597.14	591.98	5.16	--	--	<50	<0.5	<0.5	<0.5	0.5	--
07/01/91	597.14	591.30	5.84	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/91	597.14	591.20	5.94	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/23/91	597.14	591.20	5.94	--	--	<50	1.0	<0.5	<0.5	1.5	--
03/24/92	597.14	592.37	4.77	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/23/92	597.14	591.47	5.67	--	--	<50	0.9	1.1	0.5	1.6	--
09/30/92	597.14	590.84	6.30	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	597.14	591.57	5.57	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/30/93	597.14	592.08	5.06	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	597.14	591.85	5.29	--	--	<50	0.6	1.9	0.6	3.5	--
09/02/93	597.14	591.22	5.92	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/06/93	597.14	591.38	5.76	--	--	<50	<0.5	0.6	<0.5	<0.5	--
03/02/94	597.14	591.97	5.17	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/03/94	597.14	591.74	5.40	--	--	<50	<0.5	<0.5	<0.5	<0.5	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>C-3 (cont)</b>											
09/07/94	597.14	591.14	6.00	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	597.14	591.95	5.19	--	--	<50	<0.5	0.8	<0.5	<0.5	--
03/31/95	597.14	592.04	5.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/15/95	597.14	591.78	5.36	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/95	597.14	591.04	6.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	597.14	591.46	5.68	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/31/97	597.14	590.65	6.49	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/23/97	597.14	590.63	6.51	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/02/97	597.14	591.07	6.07	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/15/97	597.14	590.86	6.28	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/10/98	597.14	590.89	6.25	--	--	<50	<0.5	<0.5	<0.5	<0.5	4
06/16/98	597.14	590.80	6.34	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/25/98	597.14	590.61	6.53	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/29/98	597.14	590.59	6.55	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
03/09/99	597.14	591.20	5.94	--	--	<50	<0.5	<0.5	<0.5	<0.5	3
09/28/99	597.14	590.26	6.88	--	SAMPLED ANNUALLY		--	--	--	--	--
02/29/00	597.14	591.56	5.58	--	--	<50	<0.5	<0.5	<0.5	<0.5	10
08/29/00	597.14	590.53	6.61	0.00	--	--	--	--	--	--	--
03/27/01	597.14	591.00	6.14	0.00	--	264	<2.50	<2.50	<2.50	<2.50	870
09/05/01	597.14	590.46	6.68	0.00	--	--	--	--	--	--	<2 <sup>1</sup>
03/04/02	597.14	590.93	6.21	0.00	<50 <sup>6</sup>	<50	<0.50	<0.50	<0.50	<1.5	<5.0
09/03/02	597.14	590.40	6.74	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/29/03	597.14	590.86	6.28	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<1.5	<2.5
09/23/03	597.14	590.51	6.63	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/19/04 <sup>7</sup>	597.14	591.24	5.90	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	2
09/13/04	597.14	591.85	5.29	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/11/05 <sup>7</sup>	597.14	591.53	5.61	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	2
09/29/05	597.14	590.22	6.92	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/20/06 <sup>7</sup>	597.14	591.86	5.28	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	3
08/25/06	597.14	590.51	6.63	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/12/07 <sup>7</sup>	597.14	591.07	6.07	0.00	-- <sup>10</sup>	55	<0.5	<0.5	<0.5	<0.5	2
03/21/07	597.14	590.91	6.23	0.00	240 <sup>6</sup>	--	--	--	--	--	--
09/21/07	597.14	590.29	6.85	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/10/08 <sup>7</sup>	597.14	590.89	6.25	0.00	<50 <sup>6</sup>	87	<0.5	<0.5	<0.5	<0.5	3
09/15/08	597.14	590.15	6.99	0.00	SAMPLED ANNUALLY		--	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	FOC* ( <i>β</i> )	GWE (msl)	DTW ( <i>ft.</i> )	SPHT ( <i>β</i> )	TPH-DRO ( <i>μg/L</i> )	TPH-GRO ( <i>μg/L</i> )	B ( <i>μg/L</i> )	T ( <i>μg/L</i> )	E ( <i>μg/L</i> )	X ( <i>μg/L</i> )	MTBE ( <i>μg/L</i> )
<b>C-3 (cont)</b>											
03/03/09 <sup>7</sup>	597.14	591.22	5.92	0.00	55 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	3
08/31/09	597.14	590.38	6.76	0.00	SAMPLED ANNUALLY		--	--	--	--	--
03/24/10 <sup>7</sup>	597.14	591.82	5.32	0.00	77 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	3
02/28/11 <sup>7</sup>	597.14	591.79	5.35	0.00	<50 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	3
<b>C-4</b>											
03/25/91	593.10	588.65	4.45	--	--	2700	240	16	<0.5	350	--
07/01/91	593.10	587.77	5.33	--	--	7900	1500	230	340	350	--
09/25/91	593.10	587.60	5.50	--	--	3200	850	160	150	220	--
12/23/91	593.10	588.18	4.92	--	--	4100	390	52	42	340	--
03/24/92	593.10	589.06**	4.19	0.19	--	--	--	--	--	--	--
06/23/92	593.10	588.34**	4.91	0.30	--	--	--	--	--	--	--
09/30/92	593.10	584.44	8.66	--	--	450	97	14	12	29	--
12/16/92	593.10	583.30	9.80	--	--	590	130	18	5.6	29	--
03/30/93	593.10	583.25**	10.00	0.12	--	--	--	--	--	--	--
06/10/93	593.10	583.46	9.64	--	--	1300	290	36	17	73	--
09/02/93	593.10	583.02	10.08	--	--	630	97	12	6.6	21	--
12/06/93	593.10	582.85	10.25	--	--	1900	600	68	27	130	--
03/02/94	593.10	584.36	8.74	--	--	2600	1200	110	43	180	--
06/03/94	593.10	583.27	9.83	--	--	780	180	13	8.5	26	--
09/07/94	593.10	582.80	10.30	--	--	<50	14	<0.5	0.7	<0.5	--
12/06/94	593.10	583.90	9.20	--	--	980	270	21	12	38	--
03/31/95	593.10	582.86	10.24	--	--	1500	450	25	11	49	--
06/15/95	593.10	582.78	10.32	--	--	960	250	15	4.5	37	--
09/25/95	593.10	584.72	8.38	--	--	<500	18	<5.0	<5.0	<5.0	--
12/19/95	593.10	582.94	10.16	--	--	<500	32	<5.0	<5.0	<5.0	2,400
03/31/97	593.10	588.42	4.68	--	--	3400	960	51	64	140	2,100
06/23/97	593.10	588.36	4.74	--	--	1600	580	19	8.2	27	2,300
09/02/97	593.10	588.33	4.77	--	--	6900	1400	59	130	410	3,100
12/15/97	593.10	588.60	4.50	--	--	3300	1200	37	74	130	3,700
03/10/98	593.10	588.92	4.18	--	--	1100	250	19	13	62	4,000
06/16/98	593.10	586.53	6.57	--	--	1200	350	<10	12	39	4,500
08/25/98	593.10	586.30	6.80	--	--	290	24	0.72	0.87	1.9	3,600
12/29/98	593.10	586.80	6.30	--	--	3190	957	<25	<25	<25	8,100/8,500 <sup>1</sup>
03/09/99	593.10	585.87	7.23	--	--	2200	850	15	35	56	5,900

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>C-4 (cont)</b>											
06/23/99 <sup>2</sup>	593.10	585.60	7.50	--	--	--	--	--	--	--	--
09/28/99	593.10	586.15	6.95	--	--	1390	7.85	<5.0	<5.0	<5.0	4,190
02/29/00	593.10	586.09	7.01	--	--	<50	1.35	<0.5	<0.5	<0.5	310
08/29/00	593.10	586.58	6.52	0.00	--	150 <sup>3</sup>	60	<0.50	0.79	0.78	570
03/27/01	593.10	587.29	5.81	0.00	--	986	27.2	<2.50	3.25	4.11	252
09/05/01 <sup>4</sup>	593.10	586.72	6.38	0.00	3,800 <sup>5</sup>	330	140	0.84	<0.50	<1.5	580/520 <sup>1</sup>
03/04/02 <sup>4</sup>	593.10	587.44	5.66	0.00	2,900 <sup>6</sup>	170	67	<0.50	<0.50	<1.5	510
09/03/02 <sup>4</sup>	593.10	586.62	6.48	0.00	1,900 <sup>6</sup>	<50	12	<0.50	<0.50	<1.5	64
03/29/03 <sup>4</sup>	593.10	587.26	5.84	0.00	950 <sup>6</sup>	<50	3.3	<0.5	<0.5	<1.5	67
09/23/03 <sup>4,7</sup>	593.10	586.91	6.19	0.00	57 <sup>6</sup>	<50	<0.5	<0.5	<0.5	<0.5	12
03/17/04 <sup>7,8</sup>	593.10	587.12	5.98	0.00	1,900 <sup>6</sup>	1,500	310	5	2	4	520
09/13/04 <sup>7</sup>	593.10	588.22	4.88	0.00	1,300 <sup>6</sup>	840	260	3	2	1	990
03/11/05 <sup>7</sup>	593.10	589.20	3.90	0.00	2,900 <sup>6</sup>	350	66	1	<1	<1	1,100
09/29/05 <sup>7</sup>	593.10	585.07	8.03	0.00	2,500 <sup>6</sup>	740	160	2	1	<1	1,500
03/20/06 <sup>7</sup>	593.10	589.47	3.63	0.00	1,200 <sup>6</sup>	1,400	300	5	1	2	1,600
08/25/06 <sup>7</sup>	593.10	588.30	4.80	0.00	1,300 <sup>6</sup>	450	82	2	<0.5	<0.5	1,300
03/12/07 <sup>7</sup>	593.10	585.50	7.60	0.00	-- <sup>10</sup>	670	110	1	<0.5	<0.5	1,100
03/21/07	593.10	585.07	8.03	0.00	1,800 <sup>6</sup>	--	--	--	--	--	--
09/21/07 <sup>7</sup>	593.10	585.20	7.90	0.00	2,100 <sup>6</sup>	260	18	<0.5	<0.5	<0.5	1,100
03/10/08 <sup>7</sup>	593.10	585.69	7.41	0.00	7,500 <sup>6</sup>	560	72	1	<0.5	<0.5	1,100
03/15/08	593.10	586.45	6.65	0.00	--	--	--	--	--	--	--
09/15/08 <sup>7</sup>	593.10	585.10	8.00	0.00	5,200 <sup>6</sup>	760	110	2	0.6	<0.5	1,100
03/03/09 <sup>7</sup>	593.10	585.94	7.16	0.00	1,800 <sup>6</sup>	1,700	360	5	2	1	900
08/31/09 <sup>7</sup>	593.10	585.17	7.93	0.00	2,000 <sup>6</sup>	2,700	440	11	3	3	930
03/24/10 <sup>7</sup>	593.10	589.36	3.74	0.00	1,600 <sup>6</sup>	2,100	270	7	2	3	470
02/28/11 <sup>7</sup>	593.10	589.40	3.70	0.00	1,500 <sup>6</sup>	2,500	270	7	3	3	250
<b>C-1</b>											
03/25/91	595.82	592.54	3.28	--	--	54	0.7	<0.5	<0.5	2.0	--
07/01/91	595.82	592.39	3.43	--	--	730	250	3.0	16	4.8	--
09/25/91	595.82	591.67	4.15	--	--	160	68	1.3	6.1	1.3	--
12/23/91	595.82	592.11	3.71	--	--	170	70	1.6	3.5	2.4	--
03/24/92	595.82	592.80	3.02	--	--	60	39	4.4	3.9	9.1	--
06/23/92	595.82	592.06	3.76	--	--	60	19	1.1	1.1	1.0	--

NOT MONITORED/SAMPLED

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>TRIP BLANK</b>											
03/25/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
07/01/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/23/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/24/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/23/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/30/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/16/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/30/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/02/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/06/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/02/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/03/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/07/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/15/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/25/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/19/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/23/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/02/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/15/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/10/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/16/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/25/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/29/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
03/09/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/28/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/29/00	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/29/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
03/27/01	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500
09/05/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/04/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID/ DATE	TOC* (%)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
<b>QA</b>											
09/03/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/29/03	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5
09/23/03 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/19/04 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/13/04 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/11/05 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/29/05 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/20/06 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/25/06 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/12/07 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/21/07 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/08 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/08 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/03/09 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/31/09 <sup>7</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5

DISCONTINUED

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

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**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to August 29, 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

SPHT = Separate Phase Hydrocarbon Thickness

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH = Total Petroleum Hydrocarbons

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MTBE = Methyl Tertiary Butyl Ether

(µg/L) = Micrograms per liter

-- = Not Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

\* TOC elevations are referenced to msl.

\*\* GWE corrected for the presence of Separate Phase Hydrocarbons (SPH), correction factor:  $[(TOC-DTW)+(SPHT \times 0.80)]$ .

<sup>1</sup> Confirmation run.

<sup>2</sup> ORC installed.

<sup>3</sup> Laboratory report indicates unidentified hydrocarbons C6-C12.

<sup>4</sup> ORC in well.

<sup>5</sup> Although requested on the Chain of Custody; Laboratory did not perform TPH-D analysis with silica-gel cleanup.

<sup>6</sup> Analyzed with silica gel cleanup.

<sup>7</sup> BTEX and MTBE by EPA Method 8260.

<sup>8</sup> ORC removed.

<sup>9</sup> Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range later than #2 fuel and is also due to individual peaks eluting in the DRO range.

<sup>10</sup> Sample containers were lost during shipping.

**Table 2**  
**Groundwater Monitoring Data and Analytical Results**  
 Chevron Service Station #9-1740  
 6550 Moraga Avenue  
 Oakland, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
C-2	08/29/00	1.97	--
	03/27/01	3.60	--
	09/05/01	2.80	--
	03/04/02	3.10	--
	09/03/02	2.70	--
	03/29/03	2.20	--
	09/23/03	0.50	--
C-4	08/29/00	2.11	--
	03/27/01	2.90	--
	09/05/01	2.30	--
	03/04/02	2.90	--
	09/03/02	2.10	--
	03/29/03	1.90	--
	09/23/03	0.40	--

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**EXPLANATIONS:**

(mg/L) = Milligrams per liter

-- = Not Measured

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
C-2	09/05/01	--	<100	1,000	<2	240	30	<2	<2
	09/23/03	<50	--	12	--	--	--	--	--
	03/19/04	<50	--	370	--	--	--	--	--
	09/13/04	<50	--	530	--	--	--	--	--
	03/11/05	<50	--	580	--	--	--	--	--
	09/29/05	<50	--	320	--	--	--	--	--
	03/20/06	<50	--	500	--	--	--	--	--
	08/25/06	<50	--	460	--	--	--	--	--
	03/12/07	<50	--	110	--	--	--	--	--
	09/21/07	<50	--	180	--	--	--	--	--
	03/10/08	<50	--	170	--	--	--	--	--
	09/15/08	<50	--	150	--	--	--	--	--
	03/03/09	<50	--	54	--	--	--	--	--
	08/31/09	<50	--	240	--	--	--	--	--
	03/24/10	--	--	50	--	--	--	--	--
02/28/11	--	--	80	--	--	--	--	--	
C-3	09/05/01	--	<100	<2	<2	<2	<2	<2	<2
	03/19/04	<50	--	2	--	--	--	--	--
	09/13/04	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/11/05	<50	--	2	--	--	--	--	--
	03/20/06	<50	--	3	--	--	--	--	--
	03/12/07	<50	--	2	--	--	--	--	--
	03/10/08	<50	--	3	--	--	--	--	--
	09/15/08	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/03/09	<50	--	3	--	--	--	--	--
	03/24/10	--	--	3	--	--	--	--	--
	02/28/11	--	--	3	--	--	--	--	--
C-4	09/05/01	--	<100	520	<2	<2	15	<2	<2
	09/23/03	<50	--	12	--	--	--	--	--
	03/19/04	<50	--	520	--	--	--	--	--
	09/13/04	<100	--	990	--	--	--	--	--
	03/11/05	<100	--	1,100	--	--	--	--	--
	09/29/05	<100	--	1,500	--	--	--	--	--

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
 Chevron Service Station #9-1740  
 6550 Moraga Avenue  
 Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
C-4 (cont)	03/20/06	<50	--	1,600	--	--	--	--	--
	08/25/06	<50	--	1,300	--	--	--	--	--
	03/12/07	<50	--	1,100	--	--	--	--	--
	09/21/07	<50	--	1,100	--	--	--	--	--
	03/10/08	<50	--	1,100	--	--	--	--	--
	09/15/08	<50	--	1,100	--	--	--	--	--
	03/03/09	<100	--	900	--	--	--	--	--
	08/31/09	<50	--	930	--	--	--	--	--
	03/24/10	--	--	470	--	--	--	--	--
	02/28/11	--	--	250	--	--	--	--	--

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Chevron Service Station #9-1740  
6550 Moraga Avenue  
Oakland, California

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**EXPLANATIONS:**

TBA = t-Butyl alcohol  
MTBE = Methyl Tertiary Butyl Ether  
DIPE = di-Isopropyl ether  
ETBE = Ethyl t-butyl ether  
TAME = t-Amyl methyl ether

1,2-DCA = 1,2-Dichloroethane  
EDB = 1,2-Dibromoethane  
( $\mu\text{g/L}$ ) = Micrograms per liter  
-- = Not Analyzed

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

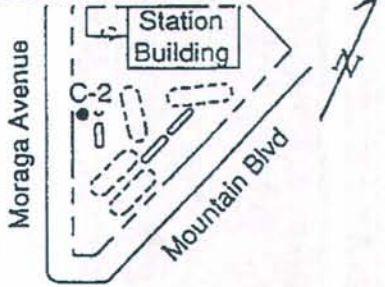
# ATTACHMENT 5

<p><b>LOCATION MAP</b></p>	<p><b>PACIFIC ENVIRONMENTAL GROUP, INC.</b></p>	<p>WELL / C-1 BORING NO. PAGE 1 OF 1</p>
<p>PROJECT NO. 320-94.01          LOGGED BY: TG          DRILLING METHOD: HSA          SAMPLING METHOD: Split Spoon          CASING TYPE: Sch 40 PVC          SLOT SIZE: 0.020"          GRAVEL PACK: 2 x 16 SAND</p>		<p>CLIENT: Chevron USA          DATE DRILLED: 3-20-91          LOCATION: 6550 Moraga, Oakland          HOLE DIAMETER: 8"          HOLE DEPTH: 25'          WELL DEPTH: 25'          WELL DIAMETER: 2"</p>

WELL COMPLETION	MOISTURE CONTENT	H-NU READING (PPM)	PENETRATION RESISTANCE (BLOWS/FT)	DEPTH (FEET)	SAMPLE GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2		CL	FILL; asphalt.
				4			SANDY CLAY; black; low plasticity; 10-20% fine to coarse grained sand; trace coarse gravel; oily; stiff; strong product odor.
	Mst	2100	9	6			
				8			
	Mst	240	6	10			@10': mottled green to black; moderate to high plasticity; 10-20% fine to medium grained sand; firm; no product odor.
	-Wt			12			
				14			@15': greenish gray; low to moderate plasticity; 10-15% fine to medium grained sand; dark green, coarse grained, angular cobble of serpentine at shoe; stiff; no product odor.
	Wt	8	13	16			
				18			
	Wt	200	15	20			@20': dark green to black; low plasticity; 10-20% fine to medium grained sand; 5-10% angular serpentine clasts; stiff; no product odor.
				22			
	Wt	ND	15	24			@25': dark brownish green; moderate plasticity; 10-15% fine grained sand; weathered and foliated serpentine layers(1"-2"); stiff; no product odor.
				26			
				28			
				30			
				32			
				34			
				36			
				38			
				40			
				42			
				44			

BOTTOM OF BORING AT 25'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL / C-2  
BORING NO.  
PAGE 1 OF 1

PROJECT NO. 320-94.01  
 LOGGED BY: TG  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: Split Spoon  
 CASING TYPE: Sch 40 PVC  
 SLOT SIZE: 0.020"  
 GRAVEL PACK: 2 x 16 SAND

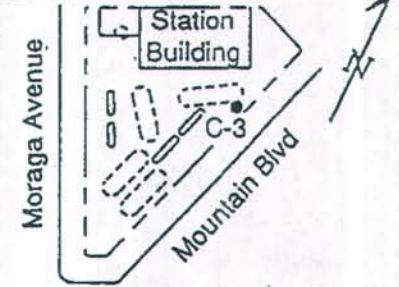
CLIENT: Chevron USA  
 DATE DRILLED: 3-20-91  
 LOCATION: 6550 Moraga, Oakland  
 HOLE DIAMETER: 8"  
 HOLE DEPTH: 30'  
 WELL DEPTH: 30'  
 WELL DIAMETER: 2"

WELL COMPLETION	MOISTURE CONTENT	H-NU READING (PPM)	PENETRATION RESISTANCE (BLOWS/FT)	DEPTH (FEET)	SAMPLE GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2		CL	FILL; concrete.
				4			SANDY CLAY; mottled green to black; moderate plasticity; 15-20% fine to medium grained sand; oily above 4.5'; very soft; moderate product odor.
				6			
				8			
				10			@10': mottled brown to black; low to moderate plasticity; 10-20% fine to medium grained sand; trace fine gravel; firm; faint product odor.
				12			
				14			@15': dark brown to black; moderate plasticity; 20-25% fine to medium grained sand; firm; no product odor.
				16			
				18			
				20			@20': dark brown to black; high plasticity; 10-20% fine grained sand; small laminations of undulating, highly weathered serpentine; very stiff; no product odor.
				22			
				24			
				26			
				28			
				30			@30': dark gray; high plasticity; 5-10% medium grained serpentine sand; laminar bedding; stiff; no product odor.
				32			
				34			
				36			
				38			
				40			
				42			
				44			

BOTTOM OF BORING AT 30'



LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL / C-3  
BORING NO.  
PAGE 1 OF 1

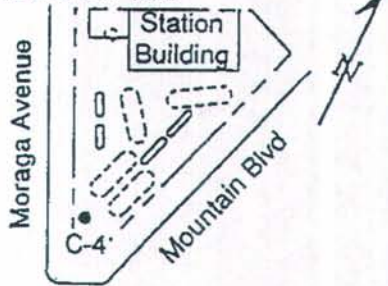
PROJECT NO. 320-94.01  
 LOGGED BY: TG  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: Split Spoon  
 CASING TYPE: Sch 40 PVC  
 SLOT SIZE: 0.020"  
 GRAVEL PACK: 2 x 16 SAND

CLIENT: Chevron USA  
 DATE DRILLED: 3-20-91  
 LOCATION: 6550 Moraga, Oakland  
 HOLE DIAMETER: 8"  
 HOLE DEPTH: 25'  
 WELL DEPTH: 25'  
 WELL DIAMETER: 2"

WELL COMPLETION	MOISTURE CONTENT	H-NU READING (PPM)	PENETRATION RESISTANCE (BLOWS/FT)	DEPTH (FEET)	SAMPLE	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2			CL	FILL; asphalt.
				4				SANDY CLAY; mottled brown to mottled dark brown; moderate to high plasticity; 10-15% fine sand; very soft; no product odor.
				6				
				8				
				10				@10': mottled dark brown; high plasticity; 15-20% fine to medium grained sand; 10% fine grained angular basalt cobbles; firm; no product odor.
				12				
				14				@15': trace coarse sand; no basalt clasts; no product odor.
				16				
				18				
				20			CL	SILTY CLAY; mottled rust to gray; moderate plasticity; 15-20% fine to medium grained sand; firm; no product odor.
				22				
				24				@25': mottled green to dark gray; moderate to high plasticity; interbedded serpentine clay and dark clay; stiff; no product odor.
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

BOTTOM OF BORING AT 25'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL / C-4  
BORING NO.  
PAGE 1 OF 1

PROJECT NO. 320-94.01  
LOGGED BY: TG  
DRILLING METHOD: HSA  
SAMPLING METHOD: Split Spoon  
CASING TYPE: Sch 40 PVC  
SLOT SIZE: 0.020"  
GRAVEL PACK: 2 x 16 SAND

CLIENT: Chevron USA  
DATE DRILLED: 3-21-91  
LOCATION: 6550 Moraga, Oakland  
HOLE DIAMETER: 8"  
HOLE DEPTH: 25'  
WELL DEPTH: 25'  
WELL DIAMETER: 2"

WELL COMPLETION	MOISTURE CONTENT	H-NU READING (PPM)	PENETRATION RESISTANCE (BLOWS/FT)	DEPTH (FEET)	SAMPLE GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
<p>The well completion diagram shows a vertical cross-section of the well. From top to bottom, it includes a 'GROUT' section, a 'BENTONITE' section, and a 'SAND' section. A water table symbol is shown at approximately 3.5 feet depth.</p>	Mst	150	PUSH	2	CL		FILL; cement; large angular serpentine cobbles(3"-8") in clay matrix.
	Wt	50	6	4			SANDY CLAY; dark brown to black; moderate plasticity; 15-20% fine to medium grained sand; rust; very soft to firm; moderate to strong product odor.
	Wt	ND	9	6	8		@9.5': lightly mottled to brownish green; moderate plasticity; 20-25% fine to medium grained sand; firm; faint product odor.
	Wt	NA	15	9	10		@15': dark gray; high plasticity; 5-10% fine to medium grained sand; stiff; no product odor.
	Wt	ND	17	15	14		@20': serpentine clast blocking sampler.
					16		@25': dark gray; high plasticity; 5-10% fine to medium grained sand; abundant, highly weathered serpentine cobbles; stiff to very stiff; no product odor.
					18		
					20		
					22		
					24		
					26		
					28		
				30			
				32			
				34			
				36			
				38			
				40			
				42			
				44			

BOTTOM OF BORING AT 25'



Cambria Environmental Technology, Inc.  
 2000 Opportunity Drive, Suite 110  
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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	GP-1
JOB/SITE NAME	Chevron Service Station # 9-1740	DRILLING STARTED	21-Apr-06
LOCATION	6550 Moraga Avenue, Oakland, CA	DRILLING COMPLETED	21-Apr-06
PROJECT NUMBER	61H-1978	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Fisch Environmental	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	L. Gearhart	DEPTH TO WATER (First Encountered)	11.0 fbg (21-Apr-06)
REVIEWED BY	D. Herzog, PG# 7211	DEPTH TO WATER (Static)	NA
REMARKS	Hand augered to 8 feet below grade.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0.5			6" Asphalt	0.5	
				1.5			Fill	1.5	
				5.0	CL		<u>CLAY</u> : Brown; dry; 50% clay, 40% silt, 10% sand; high plasticity; low estimated permeability.	5.0	Concrete
		GP-1@ 5		5.0					
				6.0	GC		<u>Clayey GRAVEL with sand</u> : Light brown; dry; 50% gravel, 30% sand, 10% clay, 10% silt; low plasticity; high estimated permeability.	6.0	Portland Type I/II
				11.0	CL		<u>CLAY</u> : Grey; moist; 80% clay, 10% silt, 10% sand; high plasticity; low estimated permeability.	11.0	
		GP-1@ 12		12.0				12.0	Bottom of Boring @ 12 fbg

WELL LOG (PID) R:19-1740-1GINT9-1740 GINT.GPJ DEFAULT.GDT 9/17/06



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	GP-2
JOB/SITE NAME	Chevron Service Station # 9-1740	DRILLING STARTED	21-Apr-06
LOCATION	6550 Moraga Avenue, Oakland, CA	DRILLING COMPLETED	21-Apr-06
PROJECT NUMBER	61H-1978	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Fisch Environmental	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	L. Gearhart	DEPTH TO WATER (First Encountered)	9.0 fbg (21-Apr-06)
REVIEWED BY	D. Herzog, PG# 7211	DEPTH TO WATER (Static)	NA
REMARKS	Hand augered to 8 feet below grade.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0.5			6" Asphalt	0.5	
				2.5			Fill	2.5	
		GP-2@ 5		5			Clayey SAND: Tan; dry; 65% sand, 20% clay, 10% silt, 5% gravel; low plasticity; moderate estimated permeability.		
				11.0	SC			11.0	
		GP-2@ 12		12.0	CL		CLAY: Grey; moist; 80% clay, 10% silt, 10% sand; high plasticity; low estimated permeability.	12.0	
									Bottom of Boring @ 12 fbg

WELL LOG (PID) R:18-1740-11GINT19-1740 GINT.GPJ DEFAULT.GDT 5/17/06



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# BORING/WELL LOG

CLIENT NAME	<u>Chevron Environmental Management Company</u>	BORING/WELL NAME	<u>GP-3</u>
JOB/SITE NAME	<u>Chevron Service Station # 9-1740</u>	DRILLING STARTED	<u>21-Apr-06</u>
LOCATION	<u>6550 Moraga Avenue, Oakland, CA</u>	DRILLING COMPLETED	<u>21-Apr-06</u>
PROJECT NUMBER	<u>61H-1978</u>	WELL DEVELOPMENT DATE (YIELD)	<u>NA</u>
DRILLER	<u>Fisch Environmental</u>	GROUND SURFACE ELEVATION	<u>Not Surveyed</u>
DRILLING METHOD	<u>Hydraulic push</u>	TOP OF CASING ELEVATION	<u>Not Surveyed</u>
BORING DIAMETER	<u>2"</u>	SCREENED INTERVAL	<u>NA</u>
LOGGED BY	<u>L. Gearhart</u>	DEPTH TO WATER (First Encountered)	<u>7.0 fbg (21-Apr-06)</u> ▽
REVIEWED BY	<u>D. Herzog, PG# 7211</u>	DEPTH TO WATER (Static)	<u>NA</u> ▽
REMARKS	<u>Hand augered to 8 feet below grade.</u>		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							6" Asphalt	0.5	
							Fill		
								2.5	Concrete
		GP-3@ 5		5	CL		CLAY: Dark brown; dry; 50% clay, 40% silt, 10% sand; high plasticity; low estimated permeability.		
								6.0	Portland Type I/II
					GC		Clayey GRAVEL with sand: Light brown; wet; 50% gravel, 30% sand, 10% clay, 10% silt; low plasticity; high estimated permeability.		
								11.0	
		GP-3@ 12			CL		CLAY: Dark grey; moist; 80% clay, 10% silt, 10% sand; high plasticity; low estimated permeability.	12.0	Bottom of Boring @ 12 fbg

WELL LOG (PID) R:19-1740-1(GINT)9-1740 GINT.GP.J DEFAULT.GDT 5/17/06



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# BORING/WELL LOG

CLIENT NAME	<u>Chevron Environmental Management Company</u>	BORING/WELL NAME	<u>GP-4</u>
JOB/SITE NAME	<u>Chevron Service Station # 9-1740</u>	DRILLING STARTED	<u>21-Apr-06</u>
LOCATION	<u>6550 Moraga Avenue, Oakland, CA</u>	DRILLING COMPLETED	<u>21-Apr-06</u>
PROJECT NUMBER	<u>61H-1978</u>	WELL DEVELOPMENT DATE (YIELD)	<u>NA</u>
DRILLER	<u>Fisch Environmental</u>	GROUND SURFACE ELEVATION	<u>Not Surveyed</u>
DRILLING METHOD	<u>Hydraulic push</u>	TOP OF CASING ELEVATION	<u>Not Surveyed</u>
BORING DIAMETER	<u>2"</u>	SCREENED INTERVAL	<u>NA</u>
LOGGED BY	<u>L. Gearhart</u>	DEPTH TO WATER (First Encountered)	<u>7.0 fbg (21-Apr-06)</u> ▼
REVIEWED BY	<u>D. Herzog, PG# 7211</u>	DEPTH TO WATER (Static)	<u>NA</u> ▼
REMARKS	<u>Hand augered to 8 feet below grade.</u>		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						6" Asphalt		
						Fill	0.5	
								Concrete
							2.5	
						<u>CLAY</u> : Dark brown; dry; 50% clay, 40% silt, 10% sand; medium plasticity; low estimated permeability.		
		GP-4@ 5	5	CL				
							6.0	
						<u>Clayey GRAVEL with sand</u> : Brown; wet; 50% gravel, 30% sand, 10% clay, 10% silt; low plasticity; high estimated permeability.		
							7.0	Portland Type I/II
						<u>CLAY</u> : Grey; dry; 80% clay, 10% silt, 10% sand; high plasticity; low estimated permeability.	8.0	
							10	
		GP-4@ 12	12				12.0	Bottom of Boring @ 12 fbg

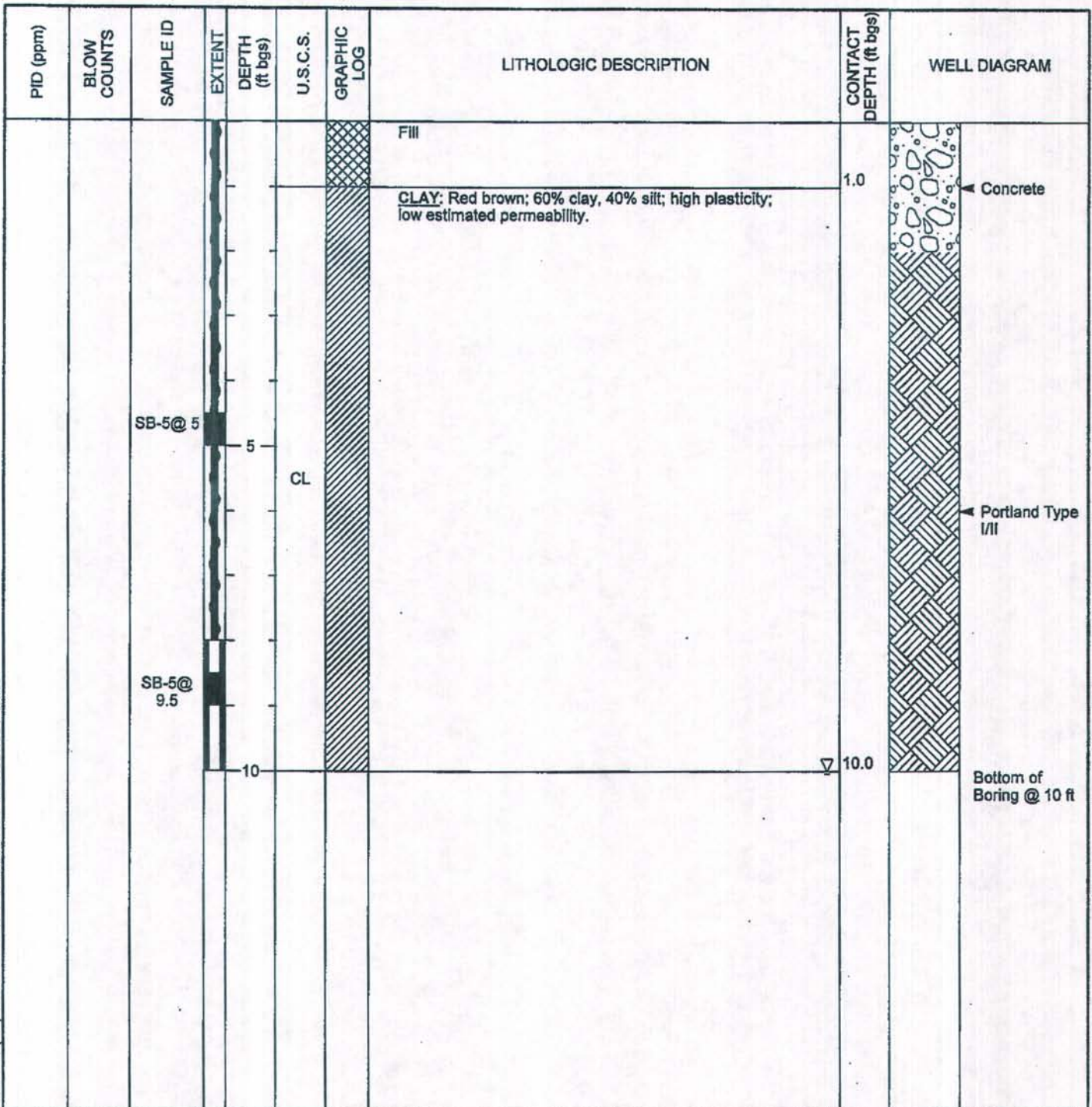
WELL LOG (PID) R:19-1740-11GINTS-1740 GINT.GPJ DEFAULT.GDT 5/17/06



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	SB-5
JOB/SITE NAME	Chevron Service Station # 9-1740	DRILLING STARTED	21-Oct-05
LOCATION	6550 Moraga Avenue, Oakland, CA	DRILLING COMPLETED	21-Oct-05
PROJECT NUMBER	61H-1978	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Cascade Drilling, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	R. Ratilainen	DEPTH TO WATER (First Encountered)	10.0 ft (21-Oct-05)
REVIEWED BY	D. Herzog, PG# 7211	DEPTH TO WATER (Static)	NA
REMARKS	Cleared with airknife to 8 fbg		



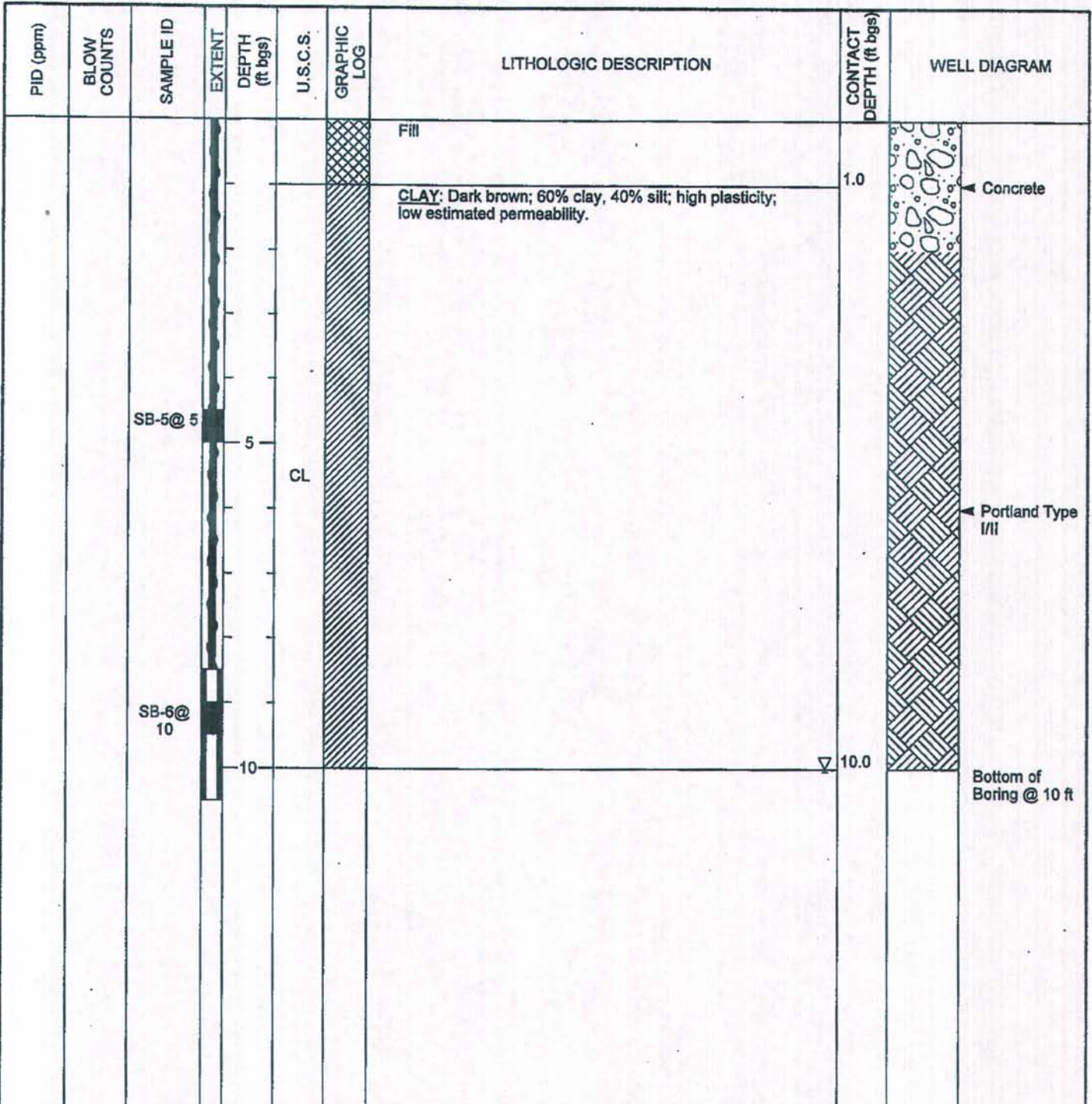
WELL LOG (PID) R:19-1740-11GINT19-1740 GINT.GPJ DEFAULT.GDT 5/8/06



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	SB-6
JOB/SITE NAME	Chevron Service Station # 9-1740	DRILLING STARTED	20-Oct-05
LOCATION	6550 Moraga Avenue, Oakland, CA	DRILLING COMPLETED	20-Oct-05
PROJECT NUMBER	61H-1978	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Cascade Drilling, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	2"	SCREENED INTERVAL	NA
LOGGED BY	R. Ratilainen	DEPTH TO WATER (First Encountered)	10.0 ft (20-Oct-05) ▽
REVIEWED BY	D. Herzog, PG# 7211	DEPTH TO WATER (Static)	NA ▽
REMARKS	Cleared with airknife to 8 fbg		



WELL LOG (PID) R:19-1740-1GINT19-1740 GINT.GPJ DEFAULT.GDT 5/8/06





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# BORING/WELL LOG

CLIENT NAME	<u>Chevron Environmental Management Company</u>	BORING/WELL NAME	<u>SB-7</u>
JOB/SITE NAME	<u>Chevron Service Station # 9-1740</u>	DRILLING STARTED	<u>20-Oct-05</u>
LOCATION	<u>6550 Moraga Avenue, Oakland, CA</u>	DRILLING COMPLETED	<u>20-Oct-05</u>
PROJECT NUMBER	<u>61H-1978</u>	WELL DEVELOPMENT DATE (YIELD)	<u>NA</u>
DRILLER	<u>Cascade Drilling, Inc.</u>	GROUND SURFACE ELEVATION	<u>Not Surveyed</u>
DRILLING METHOD	<u>Hydraulic push</u>	TOP OF CASING ELEVATION	<u>Not Surveyed</u>
BORING DIAMETER	<u>2"</u>	SCREENED INTERVAL	<u>NA</u>
LOGGED BY	<u>R. Ratilainen</u>	DEPTH TO WATER (First Encountered)	<u>10.0 ft (20-Oct-05)</u> ▽
REVIEWED BY	<u>D. Herzog, PG# 7211</u>	DEPTH TO WATER (Static)	<u>NA</u> ▽
REMARKS	<u>Cleared with airknife to 8 fbg</u>		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
						Fill		
				CL		CLAY: Dark brown; 60% clay, 40% silt; high plasticity; low estimated permeability.	1.0	Concrete
				CL		CLAY: Dark brown; 65% clay, 25% silt, 10% sand; high plasticity; low estimated permeability.	3.0	
		SB-7@ 5	5	CL				
		SB-7@ 8	8	CL				Portland Type I/II
			10				▽ 10.0	Bottom of Boring @ 10 ft

WELL LOG (PID) R:9-1740-1GINT19-1740 GINT.GPJ DEFAULT.GDT 5/8/06

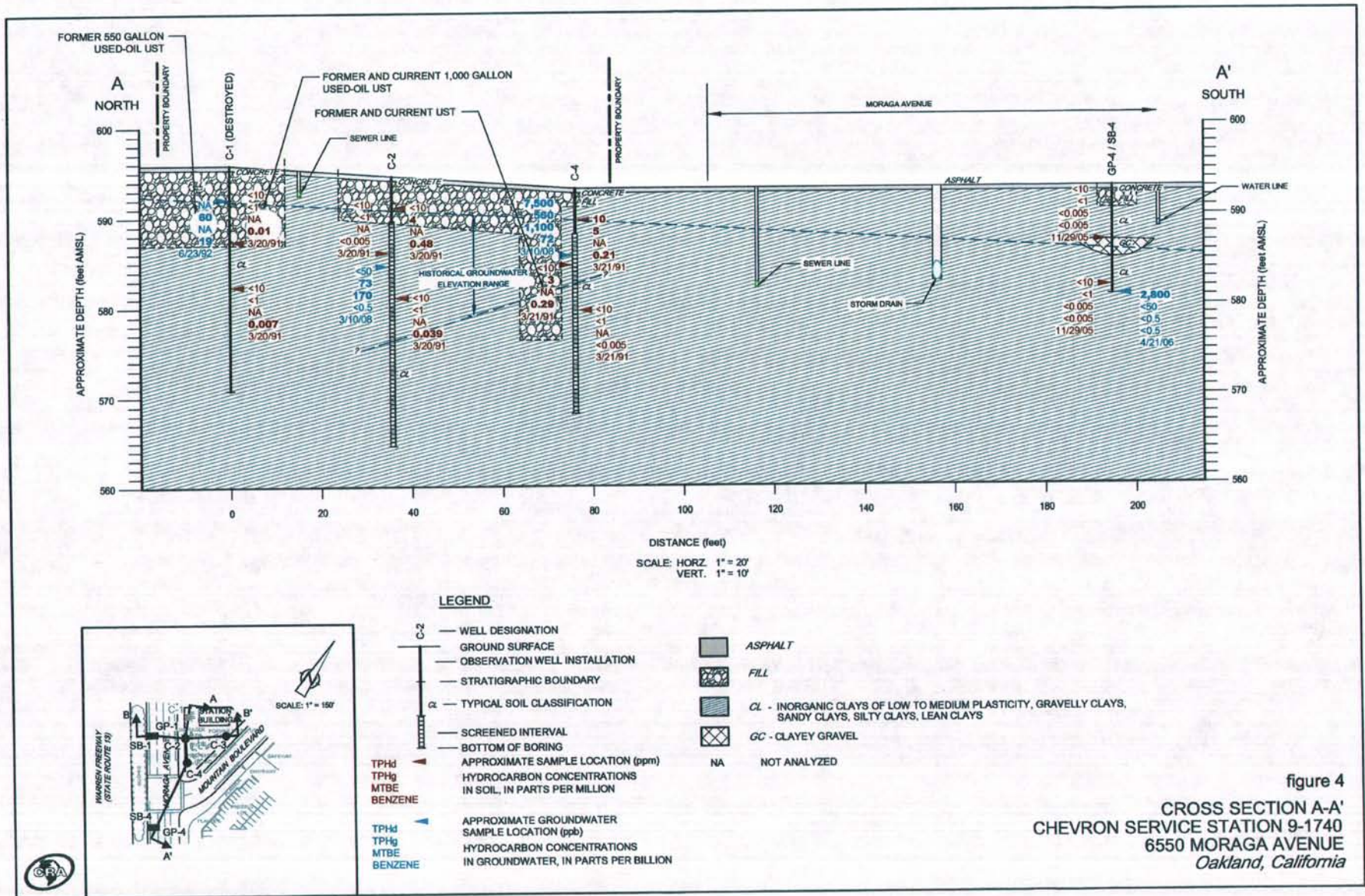
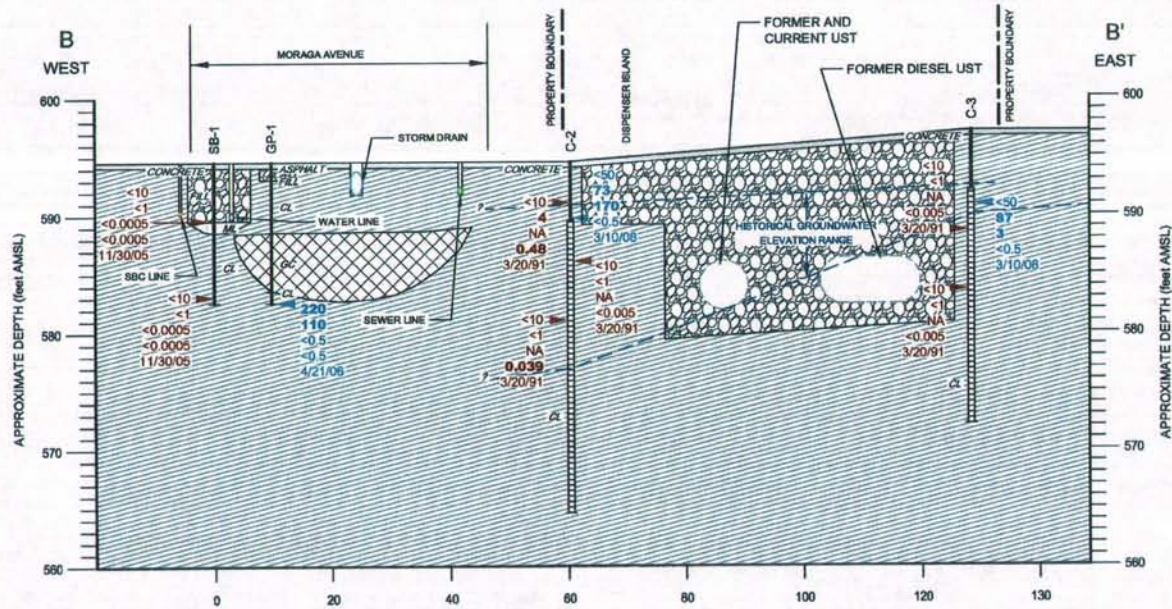


figure 4  
**CROSS SECTION A-A'**  
**CHEVRON SERVICE STATION 9-1740**  
**6550 MORAGA AVENUE**  
*Oakland, California*



DISTANCE (feet)  
 SCALE: HORZ. 1" = 20'  
 VERT. 1" = 10'

**LEGEND**

- C-2 — WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- α — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- ▲ APPROXIMATE SAMPLE LOCATION (ppm)
- ▲ HYDROCARBON CONCENTRATIONS IN SOIL, IN PARTS PER MILLION
- ▲ APPROXIMATE GROUNDWATER SAMPLE LOCATION (ppb)
- ▲ HYDROCARBON CONCENTRATIONS IN GROUNDWATER, IN PARTS PER BILLION
- ASPHALT
- FILL
- ML - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
- CL - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
- GC - CLAYEY GRAVEL
- NA NOT ANALYZED

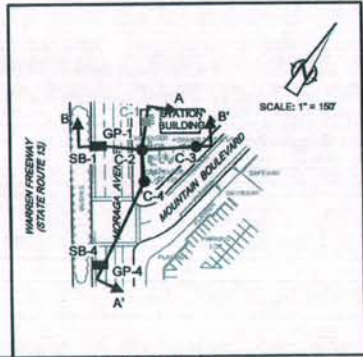


figure 5  
 CROSS SECTION B-B'  
 CHEVRON SERVICE STATION 9-1740  
 6550 MORAGA AVENUE  
 Oakland, California