ConocoPhillips
76 Broadway
Sacramento, California 95818

RECEIVED

9:59 am, Nov 09, 2010

Alameda County
Environmental Health

November 4, 2010

Ms. Barbara Jakub
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: 76 Service Station No. 5367
500 Bancroft Avenue
San Leandro, California

Site Closure Summary

Dear Ms. Jakub:

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please contact me at (916) 558-7612.

Sincerely,

Bill Borgh

Bill Borgh
Site Manager – Risk Management and Remediation

Attachment

November 4, 2010

Ms. Barbara Jakub
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

RE: SITE CLOSURE SUMMARY
76 Service Station No. 5367
500 Bancroft Avenue
San Leandro, California
Delta Project No.: C105367817
ACEH Case No. RO# 0499

DELTA

Dear Ms. Jakub

On behalf of ConocoPhillips (COP), Delta Consultants (Delta) has prepared this Site Closure Summary (attached) for above referenced site. Due to declining or non-detect concentrations, COP and Delta request case closure for this site.

If there are any questions regarding this submittal, please call James Barnard at (916) 503-1279.

Sincerely,
Delta Consultants

James B. Barnard, P.G.
California Registered Professional Geologist No. 7478

Cc: Mr. Bill Borgh – ConocoPhillips (electronic copy only)

a member of Inogen Environmental Alliance

11050 White Rock Road Suite 110 Rancho Cordova, California 95670 USA
Phone +1 916.638.2085 / USA Toll Free 800.477.7411
Fax +1 916.638.8385 www.deltaenv.com

Alameda County Environmental Health

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

I. AGENCY INFORMATION

Date: November 4, 2010

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway, Suite 250
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 639-1287
Responsible Staff Person: Barbara Jakub	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: ConocoPhillips Service Station No. 5367		
Site Facility Address: 500 Bancroft Ave, San Leandro, CA		
RB Case No.: 01-1604	Local Case No.:	LOP Case No.: RO #0499
URF Filing Date:	Geotracker ID: T0600101479	APN:

Responsible Parties	Addresses	Phone Numbers
Bill Borgh	76 Broadway, Sacramento 95818	916-558-7612

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	unknown	Gasoline	Removed	1987
2	12,000	Gasoline	In Place	Active
3	12,000	Gasoline	In Place	Active
4	12,000	Gasoline	In Place	Active
Product Piping Product Piping			Replaced Replaced	1987 1998

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Hydrocarbon Release, cause unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 10	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 16 ft below TOC	Lowest Depth: 38 ft below TOC	Flow Direction: Predominantly W, SW, NW
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity:

A well search performed in 1990 by Applied GeoSystems identified at least 15 wells within ½ mile of the site. Five of the wells were down-gradient (southwest) and within approximately 600 feet of the site. One of these wells was used for irrigation, one was abandoned, and no records pertaining to the remaining three wells were available. No municipal wells were identified within ½ mile of the site. The nearest water-supply wells were located approximately 400 feet southwest of the site.

A sensitive receptor survey was performed by Delta in August 2006. The survey consisted of a review of Department of Water Resources (DWR) files to evaluate the presence of wells within 1 mile of the site. A list of property owners within 1,000 feet of the site was also generated to evaluate if any of the properties have potential receptors of the hydrocarbon impact from the project site.

A Public Health Assessment Questionnaire presenting specific queries regarding the presence of sensitive receptors was mailed to each of the identified property owners. A total of 341 questionnaires were mailed in April 2006, and 114 responses were received. Based on the data from the responding parties, sixteen wells were identified within 1,000 feet of the site. Seven of the properties had sumps used for irrigation, and basements were present on twenty seven of the properties.

Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: San Leandro Creek ~1900 ft SE
Off-Site Beneficial Use Impacts (Addresses/Locations): Fundamental Gospel Baptist Church – 700 ft NW – 618 Victoria Ct, San Leandro All Saints Episcopal Church – 1250 ft SW - 911 Dowling Blvd, San Leandro Roosevelt Elementary School – 1450 ft W - 951 Dowling Blvd, San Leandro Washington Elementary School – 1650 ft SW - 250 Dutton Ave, San Leandro	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health, GeoTracker and Livelink

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	Unknown	Disposed – Unknown Location	1987

Piping	Unknown	Disposed – Unknown Location	1987
Free Product	----	----	----
Soil Soil	250 cu yds 30 cu yds	Disposed – Unknown Location Disposed – Unknown Location	1987 1998
Groundwater	----	----	----

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)	**3,692[1]**	**ND<1.0[3*]**	**61,000[1]**	**6600[2]**
TPH (Diesel)	NA	NA	NA	NA
TPH (Motor Oil)	NA	NA	NA	NA
Oil and Grease	NA	NA	NA	NA
Benzene	**22.1[1]**	**ND<0.0050[3*]**	**1,060[1]**	**6.9[2]**
Toluene	**129[1]**	**ND<0.0050[3*]**	**3,380[1]**	**ND<5.0[2]**
Ethylbenzene	**65[1]**	**ND<0.0050[3*]**	**1,520[1]**	**510[2]**
Xylenes	**394[1]**	**ND<0.0050[3*]**	**8,720[1]**	**38[2]**
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	^	^^	^^^	^^^^
MTBE	*	**	***	****
Other (8240/8270)	NA	NA	NA	NA

NA = not analyzed

^ NA ppm Cd; NA ppm Cr; NA ppm Pb: NA ppm Ni; NA ppm Zn

^^ NA ppm Cd; NA ppm Cr; NA ppm Pb: NA ppm Ni; NA ppm Zn

^^^ NA ppb Cd; NA ppb Cr; NA ppb Pb: NA ppb Ni; NA ppb Zn

^^^^ NA ppb Cd; NA ppb Cr; NA ppb Pb: NA ppb Ni; NA ppb Zn

* NA ppm MTBE; NA ppm TBA,; NA ppm TAME,; NA ppm ETBE; NA ppm DIPE; NA ppm EtOH ; NA ppm EDB; and NA ppm EDC

** **ND<0.025[3]** ppm MTBE; NA ppm TBA,; NA ppm TAME,; NA ppm ETBE; NA ppm DIPE; NA ppm EtOH ; NA ppm EDB; and NA ppm EDC

*** NA ppb MTBE; NA ppb TBA,; NA ppb TAME,; NA ppb ETBE; NA ppb DIPE; NA ppb EtOH ; NA ppb EDB; and NA ppb EDC

**** NA ppb MTBE; NA ppb TBA,; NA ppb TAME,; NA ppb ETBE; NA ppb DIPE; NA ppb EtOH ; **ND<5.0[2]** ppb EDB; and **ND<5.0[2]** ppb EDC

NOTES:

1. Max concentration during MW-1 installation (AGS 1988).
2. Max concentration from 3Q10 M&S event (TRC 2010).
3. Max concentration from soil samples collected during product piping replacement, *max depth of 5 ft bgs (PEG 1998).

Site History and Description of Corrective Actions:

The site is located on the northeast corner of the intersection of Bancroft Avenue and Dowling Boulevard and is an active 76 service station. Three 12,000-gallon underground storage tanks (USTs) and two dispenser islands are present at the site.

In 1987, the USTs and associated piping were replaced. During the work, approximately 250 cubic yards of impacted soil was excavated and removed from the site. A limited environmental investigation was performed by Applied GeoSystems in 1987 and consisted of advancing one boring and the installation of groundwater monitoring well MW-1 at the site. Free product (approximately ¼ inch) was present on the groundwater beneath the site. Approximately 120 pounds of free product was removed by hand bailing.

In September and October 1988, three additional monitoring wells (MW-2 through MW-4) were installed at the site by Applied GeoSystems. Based on the data from the investigation, the extent of impacted soil appeared limited to an area west and south of the tank pit between 30 and 36 feet below ground surface (bgs).

In February 1990, an additional on-site monitoring well (MW-5) and three off-site monitoring wells (MW-6 through MW-8) were installed by Applied GeoSystems. The data from this and the previous investigations indicated that impacted groundwater was present both beneath the site and off-site to the southwest. The extent of impacted soil and groundwater appeared to be assessed to the east of the USTs and to the west of the site.

A well search performed in 1990 by Applied GeoSystems identified at least 15 wells within ½ mile of the site. Five of the wells were down-gradient (southwest) and within approximately 600 feet of the site. One of these wells was used for irrigation, one was abandoned, and no records pertaining to the remaining three wells were available. No municipal wells were identified within ½ mile of the site. The nearest water-supply wells were located approximately 400 feet southwest of the site.

Between mid-1994 and mid-1995, two additional monitoring wells (MW-9 and MW-10) were installed to the west and south of the site, respectively.

Between March 1996 and March 1997, soil vapor extraction (SVE) and groundwater extraction (GWE) remediation systems operated at the site. During this time, approximately 637,151 gallons of impacted groundwater were removed by the GWE system. An estimated 180 pounds and 108 pounds of total petroleum hydrocarbons as gasoline (TPHg) were removed by the SVE and GWE systems, respectively.

In November 1998, the product piping was replaced and approximately 30 cubic yards of soil was removed from the site. Spill containment sumps and electronic leak detection were also installed.

A sensitive receptor survey was performed by Delta in August 2006. The survey consisted of a review of Department of Water Resources (DWR) files to evaluate the presence of wells within 1 mile of the site. A list of property owners within 1,000 feet of the site was also generated to evaluate if any of the properties have potential receptors of the hydrocarbon impact from the project site.

A Public Health Assessment Questionnaire presenting specific queries regarding the presence of sensitive receptors was mailed to each of the identified property owners. A total of 341 questionnaires were mailed in April 2006, and 114 responses were received. Based on the data from the responding parties, sixteen wells were identified within 1,000 feet of the site. Seven of the properties had sumps used for irrigation, and basements were present on twenty seven of the properties.

Delta also reviewed the DWR files to prepare a list of parcel numbers, property owner's names, and property addresses of potential receptors within a 1-mile radius of the site. Questionnaires were mailed to 43 addresses in June 2006, but only two responses were received. The two respondents had a well on their property; however, no sumps or basements were present.

Based on the U.S. Geological Survey (USGS) topographic map for the site area (San Leandro quadrangle, 1967), the nearest surface water body is San Leandro Creek located approximately 1,900 feet southeast of the site.

On April 23, 2007, an irrigation well was purged and sampled by Delta. The well was sampled at the request of a nearby resident, located at 589 Broadmoor Boulevard in San Leandro. Groundwater samples were collected and analyzed from the well for Total Purgeable Petroleum Hydrocarbons (TPPH); benzene, toluene, ethyl-benzene, and total xylenes (BTEX); methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), TBA, 1,2-dichloroethane (1,2-DCA), ethylene di-bromide (EDB), and ethanol - (8 oxygenates) by Environmental Protection Agency (EPA) Method 8260. All constituents tested were below the laboratory's indicated reporting limits.

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.		
Site Management Requirements:		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? Yes No		Date Recorded:
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 10
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

- No soil samples have been collected from below 5 ft bgs since the last monitoring wells were installed in 1990.

Conclusion:

Additional soil sampling may be required prior to closure in order to verify impact in site soils.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by	Title: Hazardous Materials Specialist
Signature:	Date:
Approved by:	Title: Supervising Hazardous Materials Specialist
Signature:	Date:

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:	Title:
Notification Date:	

VIII. MONITORING WELL DECOMMISSIONING

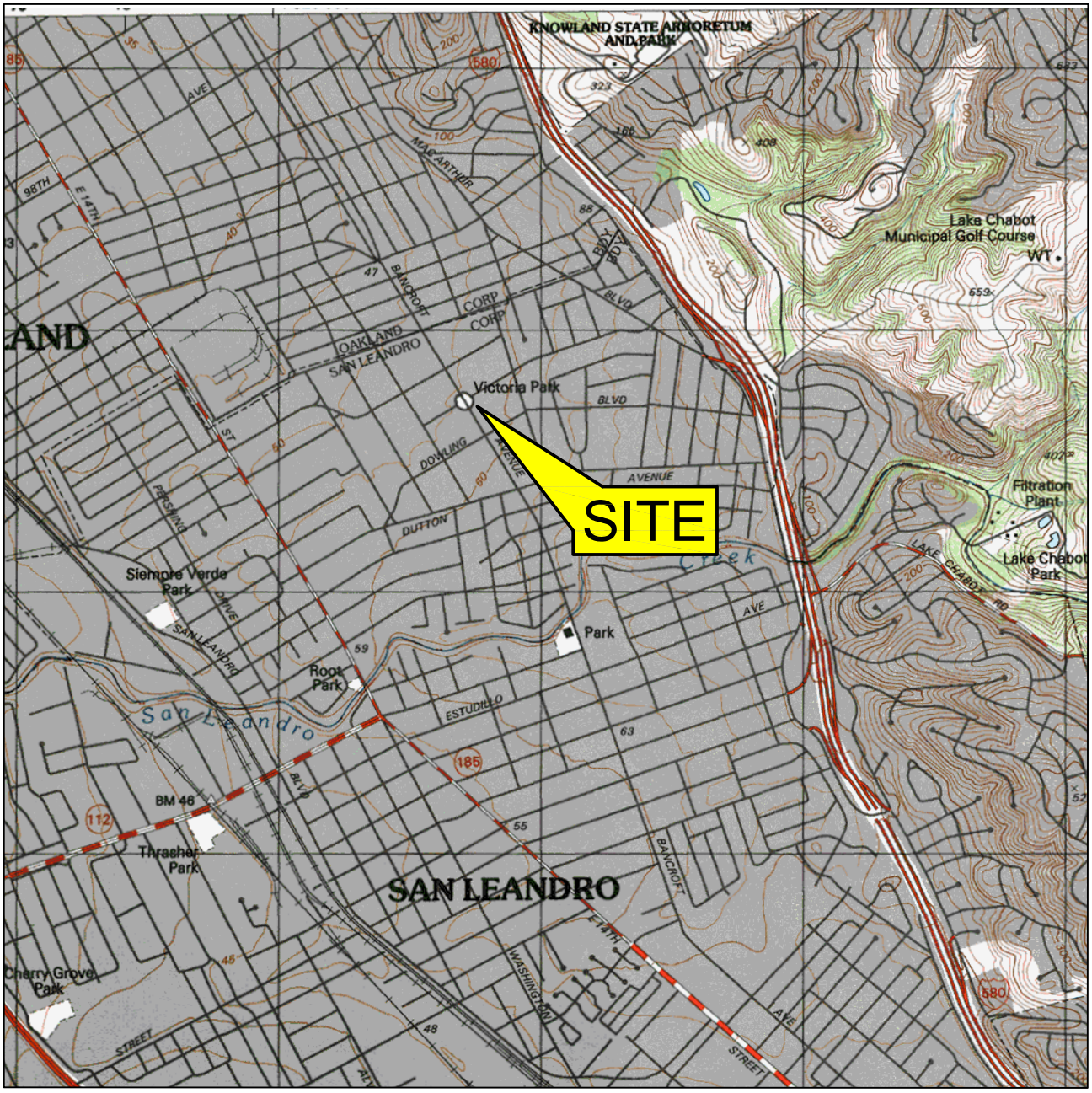
Date Requested by ACEH: N/A	Date of Well Decommissioning Report: N/A	
All Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 10
Reason Wells Retained: Wells will be abandoned once closure is granted.		
Additional requirements for submittal of groundwater data from retained wells:		
ACEH Concurrence - Signature:		Date:

ATTACHMENTS:
Attachment 1 – Site Vicinity Map (1 pp)
Attachment 2 – Site Plans (1 pp)
Attachment 3 – AGS 1988 Soil Analyticals (11 pp)
Attachment 4 – 3Q10 M&S Analyticals (29 pp)
Attachment 5 – PEG 1998 Soil Analyticals (18 pp)
Attachment 6 – Historical Boring Logs (20 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.

ATTACHMENT 1

Site Vicinity Map
(1 pp)



North

FIGURE 1

SITE LOCATION MAP

76 SERVICE STATION NO. 5367
500 BANCROFT AVENUE
SAN LEANDRO, CA

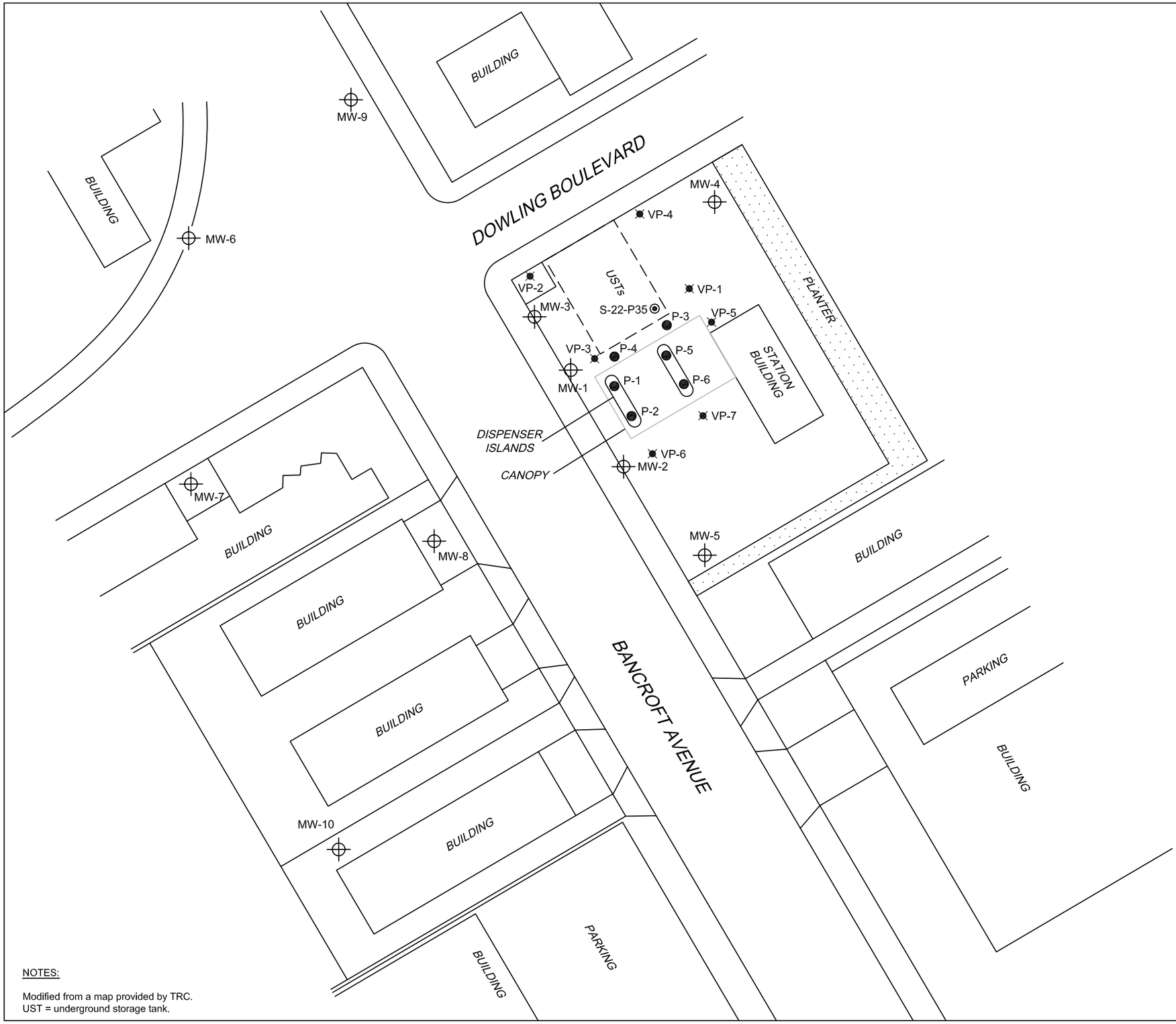
PROJECT NO. C105-367	DRAWN BY MC 5/25/06
FILE NO. Site Locator 5367	PREPARED BY MC
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SAN LEANDRO QUADRANGLE, 1967

ATTACHMENT 2

Site Plans
(1 pp)



LEGEND

- MONITORING WELL
- APPROXIMATE LOCATION OF TANK PIT SAMPLE
- PRODUCT LINE SAMPLE LOCATION
- VAPOR POINT

N

0 40 FT

SCALE

NOTES:

Modified from a map provided by TRC.
UST = underground storage tank.

FIGURE 2
SITE PLAN

76 STATION NO. 5367
500 BANCROFT AVENUE
SAN LEANDRO, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C105367	EW	JH
DATE	REVIEWED BY	FILE NAME
12/15/08	JW	76-5367

DELTA®

ATTACHMENT 3

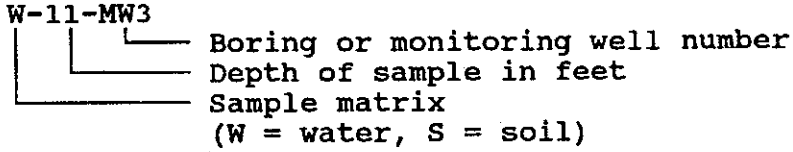
AGS 1988 Soil Analyticals
(11 pp)

water samples are presented on Table 3.

TABLE 3
RESULTS OF SOIL AND WATER ANALYSES
UNOCAL Service Station No. 5367
500 Bancroft Avenue
San Leandro, California

Sample Number	TPH	Benzene	Ethyl-benzene	Toluene	Total Xylenes
S-10.5-B2	<2	<0.05	<0.05	<0.05	<0.05
S-30.5-B2	52	0.17	1.52	<0.05	5.11
S-26.0-B3	7	0.10	0.30	0.45	1.67
S-36.0-B3	3,692	8	65	129	394
S-11-B4	<2	<0.05	<0.05	<0.05	<0.05
S-30.5-B4	<2	<0.05	<0.05	<0.05	<0.05
W-37-MW2	1.76	0.0478	0.0209	0.0074	0.0816
W-37-MW3	61	1.06	1.52	3.38	8.72
W-37-MW4	<0.0005	<0.0005	<0.0005	<0.0005	<0.02

Results in parts per million (ppm).
TPH = Total petroleum hydrocarbons
< = Less than the detection limit for analysis used
NA = Not analyzed
Sample designation:



Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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ANALYSIS REPORT

0212lab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Boulevard
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-03-88
Laboratory Number: 10003S01
Project: 87091-3
Sample: S-10.5-B2
Matrix: Soil

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline	ND		2		10-04-88	
TEH as Diesel						NR
Benzene	ND		0.05		10-04-88	
Toluene	ND		0.05		10-04-88	
Ethylbenzene	ND		0.05		10-04-88	
Total Xylenes	ND		0.05		10-04-88	

mg/kg = milligrams per kilogram = parts per million (ppm).
mg/L = milligrams per liter = ppm.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not required.

PROCEDURES

TVH/BTEX--Total volatile hydrocarbons (TVH) and benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction according to EPA Method 5030 followed by analysis by a EPA Method 8020/602 (modified for TVH) which uses a gas chromatograph (GC) equipped with a photo-ionization detector (PID) and a flame-ionization detector (FID) in series. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TPH--Total petroleum hydrocarbons (low-to-medium boiling points) are measured by extraction according to EPA Method 5030 followed by analysis by a modified EPA Method 8015 which uses a GC equipped with an FID. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TEH--Total extractable hydrocarbons (high boiling points) are measured by extraction according to EPA Method 3550 for soils or EPA Method 3510 for water followed by a modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Tia Tran, Laboratory Supervisor

10-11-88
Date Reported

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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ANALYSIS REPORT

0212lab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Boulevard
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-03-88
Laboratory Number: 10003S02
Project: 87091-3
Sample: S-30.5-B2
Matrix: Soil

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline	52		2		10-04-88	
TEH as Diesel						NR
Benzene	0.17		0.05		10-04-88	
Toluene	ND		0.05		10-04-88	
Ethylbenzene	1.52		0.05		10-04-88	
Total Xylenes	5.11		0.05		10-04-88	

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mg/L = milligrams per liter = ppm.
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NR = Analysis not required.

PROCEDURES

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TPH--Total petroleum hydrocarbons (low-to-medium boiling points) are measured by extraction according to EPA Method 5030 followed by analysis by a modified EPA Method 8015 which uses a GC equipped with an FID. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

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Tia Tran, Laboratory Supervisor

10-11-88
Date Reported

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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ANALYSIS REPORT

0212lab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Boulevard
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-03-88
Laboratory Number: 10003S03
Project: 87091-3
Sample: S-26.0-B3
Matrix: Soil

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline	7		2		10-04-88	
TEH as Diesel						NR
Benzene	0.10		0.05		10-04-88	
Toluene	0.45		0.05		10-04-88	
Ethylbenzene	0.30		0.05		10-04-88	
Total Xylenes	1.67		0.05		10-04-88	

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Tia Tran, Laboratory Supervisor

10-11-88
Date Reported

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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ANALYSIS REPORT

02121ab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Boulevard
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-03-88
Laboratory Number: 10003S04
Project: 87091-3
Sample: S-36.0-B3
Matrix: Soil

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline	3692		20		10-04-88	
TEH as Diesel						NR
Benzene	8		1		10-04-88	
Toluene	129		1		10-04-88	
Ethylbenzene	65		1		10-04-88	
Total Xylenes	394		1		10-04-88	

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Tia Tran, Laboratory Supervisor

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ANALYSIS REPORT

0212lab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Boulevard
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-03-88
Laboratory Number: 10003S05
Project: 87091-3
Sample: S-11-B4
Matrix: Soil

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline	ND		2		10-04-88	
TEH as Diesel						NR
Benzene	ND		0.05		10-04-88	
Toluene	ND		0.05		10-04-88	
Ethylbenzene	ND		0.05		10-04-88	
Total Xylenes	ND		0.05		10-04-88	

mg/kg = milligrams per kilogram = parts per million (ppm).
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NR = Analysis not required.

PROCEDURES

TVH/BTEX--Total volatile hydrocarbons (TVH) and benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction according to EPA Method 5030 followed by analysis by a EPA Method 8020/602 (modified for TVH) which uses a gas chromatograph (GC) equipped with a photo-ionization detector (PID) and a flame-ionization detector (FID) in series. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TPH--Total petroleum hydrocarbons (low-to-medium boiling points) are measured by extraction according to EPA Method 5030 followed by analysis by a modified EPA Method 8015 which uses a GC equipped with an FID. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TEH--Total extractable hydrocarbons (high boiling points) are measured by extraction according to EPA Method 3550 for soils or EPA Method 3510 for water followed by a modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Tia Tran, Laboratory Supervisor

10-11-88
Date Reported

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906
• FREMONT • COSTA MESA • SACRAMENTO • HOUSTON

ANALYSIS REPORT

0212lab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Boulevard
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-03-88
Laboratory Number: 10003S06
Project: 87091-3
Sample: S-30.5-B4
Matrix: Soil

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline	ND		2		10-04-88	
TEH as Diesel						NR
Benzene	ND		0.05		10-04-88	
Toluene	ND		0.05		10-04-88	
Ethylbenzene	ND		0.05		10-04-88	
Total Xylenes	ND		0.05		10-04-88	

mg/kg = milligrams per kilogram = parts per million (ppm).
mg/L = milligrams per liter = ppm.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not required.

PROCEDURES

TVH/BTEX--Total volatile hydrocarbons (TVH) and benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction according to EPA Method 5030 followed by analysis by a EPA Method 8020/602 (modified for TVH) which uses a gas chromatograph (GC) equipped with a photo-ionization detector (PID) and a flame-ionization detector (FID) in series. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TPH--Total petroleum hydrocarbons (low-to-medium boiling points) are measured by extraction according to EPA Method 5030 followed by analysis by a modified EPA Method 8015 which uses a GC equipped with an FID. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

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Tia Tran, Laboratory Supervisor

10-11-88
Date Reported

CHAIN OF CUSTODY RECORD

Applied GeoSystems
43255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-19[illegible]

SAMPLER (signature): Burt E. [illegible]

Phone:

LABORATORY: Applied GeoSystems

TURNAROUND TIME: 2 weeks

Attention: John Lambert

Phone No. 415-651-1906

SHIPPING INFORMATION:

Shipper

Address

Date Shipped

Service Used

Airbill No. Cooler No.

Relinquished by: (signatures)	Received by: (signatures)	Date	Time
Burt E. [illegible]	[signature]	5 Oct 88	8:43
[signature]	Received for laboratory by: [signature]	10-5-88	9:00 AM

LABORATORY SHOULD SIGN UPON RECEIPT AND RETURN A COPY OF THIS FORM WITH THE LABORATORY RESULTS

Sample No.	Site Identification	Date Sampled	Analyses Requested	Sample Condition Upon Receipt
W-37-MW2	87091-3	10-4-88	all BETX TPH	iced
W-37-MW3	87091-3	10-4-88		iced
W-37-MW4	87091-3	10-3-88		iced

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906
• FREMONT • COSTA MESA • SACRAMENTO • HOUSTON

ANALYSIS REPORT

0212lab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Blvd.
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-05-88
Laboratory Number: 10008W01
Project: 87091-3
Sample: W-37-MW2
Matrix: Water

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline		1.76		0.02	10-06-88	
TEH as Diesel						NR
Benzene		0.0478		0.0005	10-06-88	
Toluene		0.0074		0.0005	10-06-88	
Ethylbenzene		0.0209		0.0005	10-06-88	
Total Xylenes		0.0816		0.0005	10-06-88	

mg/kg = milligrams per kilogram = parts per million (ppm).
mg/L = milligrams per liter = ppm.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not required.

PROCEDURES

TVH/BTEX--Total volatile hydrocarbons (TVH) and benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction according to EPA Method 5030 followed by analysis by a EPA Method 8020/602 (modified for TVH) which uses a gas chromatograph (GC) equipped with a photo-ionization detector (PID) and a flame-ionization detector (FID) in series. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TPH--Total petroleum hydrocarbons (low-to-medium boiling points) are measured by extraction according to EPA Method 5030 followed by analysis by a modified EPA Method 8015 which uses a GC equipped with an FID. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TEH--Total extractable hydrocarbons (high boiling points) are measured by extraction according to EPA Method 3550 for soils or EPA Method 3510 for water followed by a modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Tia Tran, Laboratory Supervisor

10-13-88
Date Reported

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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ANALYSIS REPORT

02121ab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Blvd.
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-05-88
Laboratory Number: 10008W02
Project: 87091-3
Sample: W-37-MW3
Matrix: Water

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline		61		1	10-06-88	
TEH as Diesel						NR
Benzene		1.06		0.05	10-06-88	
Toluene		3.38		0.05	10-06-88	
Ethylbenzene		1.52		0.05	10-06-88	
Total Xylenes		8.72		0.05	10-06-88	

mg/kg = milligrams per kilogram = parts per million (ppm).
mg/L = milligrams per liter = ppm.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not required.

PROCEDURES

TVH/BTEX--Total volatile hydrocarbons (TVH) and benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction according to EPA Method 5030 followed by analysis by a EPA Method 8020/602 (modified for TVH) which uses a gas chromatograph (GC) equipped with a photo-ionization detector (PID) and a flame-ionization detector (FID) in series. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TPH--Total petroleum hydrocarbons (low-to-medium boiling points) are measured by extraction according to EPA Method 5030 followed by analysis by a modified EPA Method 8015 which uses a GC equipped with an FID. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

TEH--Total extractable hydrocarbons (high boiling points) are measured by extraction according to EPA Method 3550 for soils or EPA Method 3510 for water followed by a modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Tia Tran, Laboratory Supervisor

10-13-88
Date Reported

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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ANALYSIS REPORT

0212lab.frm

Report Prepared for:
Applied GeoSystems
43255 Mission Blvd.
Fremont, CA 94539
Attention: John T. Lambert

Date Received: 10-05-88
Laboratory Number: 10008W03
Project: 87091-3
Sample: W-37-MW4
Matrix: Water

Parameter	Result (mg/kg)	Result (mg/L)	Detection Limit (mg/kg)	Detection Limit (mg/L)	Date Analyzed	Notes
TVH as Gasoline						NR
TPH as Gasoline		ND		0.02	10-06-88	
TEH as Diesel						NR
Benzene		ND		0.0005	10-06-88	
Toluene		ND		0.0005	10-06-88	
Ethylbenzene		ND		0.0005	10-06-88	
Total Xylenes		ND		0.0005	10-06-88	

mg/kg = milligrams per kilogram = parts per million (ppm).
mg/L = milligrams per liter = ppm.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not required.

PROCEDURES

TVH/BTEX--Total volatile hydrocarbons (TVH) and benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction according to EPA Method 5030 followed by analysis by a EPA Method 8020/602 (modified for TVH) which uses a gas chromatograph (GC) equipped with a photo-ionization detector (PID) and a flame-ionization detector (FID) in series. Soil extracts and water samples are subjected to purge-and-trap introduction into the GC.

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TEH--Total extractable hydrocarbons (high boiling points) are measured by extraction according to EPA Method 3550 for soils or EPA Method 3510 for water followed by a modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Tia Tran, Laboratory Supervisor

10-13-88
Date Reported

ATTACHMENT 4

3Q10 M&S Analyticals
(29 pp)

Table 1

CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

September 30, 2010

76 Station 5367

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G 8015 (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-1			**(Screen Interval in feet: 10.0-35.0)**											
9/30/2010	57.83	30.63	0.00	27.20	-1.95	--	6600	6.9	ND<5.0	510	38	--	ND<5.0	
MW-2			**(Screen Interval in feet: 28.0-48.0)**											
9/30/2010	58.13	30.48	0.00	27.65	-1.97	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-3			**(Screen Interval in feet: 23.0-48.0)**											
9/30/2010	57.92	30.13	0.00	27.79	-1.95	--	99	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-4			**(Screen Interval in feet: 23.0-48.0)**											
9/30/2010	58.29	31.43	0.00	26.86	-2.29	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-5			**(Screen Interval in feet: 25.0-45.0)**											
9/30/2010	58.50	31.10	0.00	27.40	-1.97	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-6			**(Screen Interval in feet: 25.0-45-0)**											
9/30/2010	56.96	29.88	0.00	27.08	-2.11	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-7			**(Screen Interval in feet: 24.0-44.0)**											
9/30/2010	57.25	30.22	0.00	27.03	-2.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-8			**(Screen Interval in feet: 24.0-44.0)**											
9/30/2010	57.71	30.52	0.00	27.19	-2.17	--	130	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-9			**(Screen Interval in feet: 20.0-45.0)**											
9/30/2010	56.47	29.23	0.00	27.24	-1.94	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
MW-10			**(Screen Interval in feet: 20.0-45.0)**											
9/30/2010	58.94	31.90	0.00	27.04	-2.37	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 10/13/2010

Anju Farfan

TRC
123 Technology Drive
Irvine, CA 92618

RE: 5367
BC Work Order: 1013706
Invoice ID: B088291

Enclosed are the results of analyses for samples received by the laboratory on 9/30/2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Table of Contents

BC LABORATORIES, INC. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918

CHAIN OF CUSTODY

10-13706

Analysis Requested

Bill to: Conoco Phillips/ TRC	Consultant Firm: TRC
Address: 500 Bancroft Ave.	21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan
City: San Leandro	4-digit site#: 5367 Workorder # 0400-4512941504
State: CA Zip:	Project #: 173845
Conoco Phillips Mgr: Bill Borgh	Sampler Name: A Viders

MATRIX: (GW) Groundwater (circled), (S) Soil, (WW) Waste-water, (SL) Sludge

Lab#	Sample Description	Field Point Name	Date & Time Sampled	MATRIX	BTEX/MTBE by 8021B, Gas by 8015	TPH GAS by 8015M	TPH DIESEL by 8015	8260 full list w/ oxygenates	BTEX/MTBE[redacted] BY 8260B	ETHANOL by 8260B	TPH –G by GC/MS, EDB/EDC by 8260B	EDB by 504			Turnaround Time Requested
-1		MW-9	09/30/10 0729	3					X		X				STD
-2		MW-8	↓ 0819	6					↓		↓	X			↓
-3		MW-6	0755	6								X			
-4		MW-10	0842	3											
-5		MW-4	0921	↓											
-6		MW-3	0948												
-7		MW-2	1033												
-8		MW-5	↓ 1006	↓					↓		↓				↓

Comments:	Relinquished by: (Signature)	Received by:	Date & Time
	[signature]	Ross Dickey	9/30/10 1450
	Relinquished by: (Signature) Ross Dickey 9/30/10	Received by: R C Raymond	Date & Time 9.30.10 1820
GLOBAL ID: T0600101479	Relinquished by: (Signature) R C Raymond 9.30.10 2130	Received by: [signature]	Date & Time 9/30/10 2130

BC LABORATORIES, INC. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918

CHAIN OF CUSTODY

1013706

Analysis Requested

Bill to: Conoco Phillips/ TRC	Consultant Firm: TRC
Address: 500 Bancroft Ave	21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan
City: San Leandro	4-digit site#: 5367
	Workorder # 01400-4512941504
State: CA Zip:	Project #: 173845
Conoco Phillips Mgr: Bill Borgh	Sampler Name: A. Viduers

MATRIX: (GW) Groundwater (S) Soil (WW) Wastewater (SL) Sludge

Lab#	Sample Description	Field Point Name	Date & Time Sampled	MATRIX	BTEX/MTBE by 8021B, Gas by 8015	TPH GAS by 8015M	TPH DIESEL by 8015	8260 full list w/ oxygenates	BTEX/MTBE/[illegible] BY 8260B	ETHANOL by 8260B	TPH -G by GC/MS, EDB/EDC by 8260B	EDB by 504			Turnaround Time Requested
-9		MW-7	09/30/10 1110	3					X		X				STD
-10		MW-1	↓ 1048	6					X		X	X			↓

CHK BY DISTRIBUTION SUB-OUT

Comments:	Relinquished by: (Signature)	Received by:	Date & Time
GLOBAL ID: T0600101479	Relinquished by: (Signature) Ross Dicky 9/30/10	Received by: R C Ruyle	9/30/10 1820
	Relinquished by: (Signature) R C Ruyle 9.30.10 2130	Received by:	9/29/10 2130

Chain of Custody and Cooler Receipt Form for 1013706 Page 3 of 3

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 10-13706

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☑ Comments: 06

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: 0.95 Container: 109 Thermometer ID: 103 Date/Time 9-30-10

Temperature: A 4.3 °C / C 4.3 °C Analyst Init JDW 2150

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: JDW Date/Time: 10-1-10 1700

A = Actual / C = Corrected

[H:\DOCS\WPB\LAB_DOCS\FORMS\SAMREC2.WPD]

TRC
123 Technology Drive
Irvine, CA 92618

Reported: 10/13/2010 14:46
Project: 5367
Project Number: 4512941504
Project Manager: Anju Farfan

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1013706-01	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 07:29
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-9	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-9
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1013706-02	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 08:19
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-8	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-8
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1013706-03	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 07:55
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-6	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-6
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1013706-04	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 08:42
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-10	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-10
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

TRC
123 Technology Drive
Irvine, CA 92618

Reported: 10/13/2010 14:46
Project: 5367
Project Number: 4512941504
Project Manager: Anju Farfan

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1013706-05	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 09:21
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-4
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1013706-06	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 09:48
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-3	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-3
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1013706-07	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 10:33
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-2	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-2
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1013706-08	**COC Number:**	---	**Receive Date:** 09/30/2010 21:30
	Project Number:	5367	**Sampling Date:** 09/30/2010 10:06
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-5	**Sample Matrix:** Water
	Sampled By:	TRCI	Delivery Work Order:
			Global ID: T0600101479
			Location ID (FieldPoint): MW-5
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:

TRC
123 Technology Drive
Irvine, CA 92618

Reported: 10/13/2010 14:46
Project: 5367
Project Number: 4512941504
Project Manager: Anju Farfan

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
1013706-09	**COC Number:**	---	**Receive Date:**	09/30/2010 21:30
	Project Number:	5367	**Sampling Date:**	09/30/2010 11:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-7	**Sample Matrix:**	Water
	Sampled By:	TRCI	Delivery Work Order:	
			Global ID: T0600101479	
			Location ID (FieldPoint): MW-7	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	
1013706-10	**COC Number:**	---	**Receive Date:**	09/30/2010 21:30
	Project Number:	5367	**Sampling Date:**	09/30/2010 10:48
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	MW-1	**Sample Matrix:**	Water
	Sampled By:	TRCI	Delivery Work Order:	
			Global ID: T0600101479	
			Location ID (FieldPoint): MW-1	
			Matrix: W	
			Sample QC Type (SACode): CS	
			Cooler ID:	

TRC
123 Technology Drive
Irvine, CA 92618

Reported: 10/13/2010 14:46
Project: 5367
Project Number: 4512941504
Project Manager: Anju Farfan

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-01 | **Client Sample Name:** 5367, MW-9, 9/30/2010 7:29:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	85.4	%	88 - 110 (LCL - UCL)	EPA-8260		A20,S09	1
4-Bromofluorobenzene (Surrogate)	94.9	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 21:02	KEA	MS-V10	1	BTJ0204

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Project: 5367
Project Number: 4512941504
Project Manager: Anju Farfan

EDB/DBCP Analysis (EPA Method 504.1)

BCL Sample ID: 1013706-02 | **Client Sample Name:** 5367, MW-8, 9/30/2010 8:19:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Ethylene dibromide	ND	ug/L	0.010	EPA-504.1	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-504.1	10/12/10	10/12/10 15:59	VH1	GC-4	0.945	BTJ0729

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Project Manager: Anju Farfan

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-02 | **Client Sample Name:** 5367, MW-8, 9/30/2010 8:19:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**130**	**ug/L**	**50**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	94.4	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 20:44	KEA	MS-V10	1	BTJ0204

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EDB/DBCP Analysis (EPA Method 504.1)

BCL Sample ID: 1013706-03 | **Client Sample Name:** 5367, MW-6, 9/30/2010 7:55:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Ethylene dibromide	ND	ug/L	0.010	EPA-504.1	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-504.1	10/12/10	10/12/10 16:13	VH1	GC-4	0.942	BTJ0729

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-03 | **Client Sample Name:** 5367, MW-6, 9/30/2010 7:55:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	88.9	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	95.3	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 20:26	KEA	MS-V10	1	BTJ0204

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-04 | **Client Sample Name:** 5367, MW-10, 9/30/2010 8:42:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	79.1	%	88 - 110 (LCL - UCL)	EPA-8260		A20,S09	1
4-Bromofluorobenzene (Surrogate)	94.4	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 20:09	KEA	MS-V10	1	BTJ0204

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-05 | **Client Sample Name:** 5367, MW-4, 9/30/2010 9:21:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	95.8	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 19:51	KEA	MS-V10	1	BTJ0204

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-06 | **Client Sample Name:** 5367, MW-3, 9/30/2010 9:48:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	**99**	**ug/L**	**50**	**Luft-GC/MS**	**ND**		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	96.0	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.0	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 19:33	KEA	MS-V10	1	BTJ0204

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-07 | **Client Sample Name:** 5367, MW-2, 9/30/2010 10:33:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	97.7	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.2	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 19:15	KEA	MS-V10	1	BTJ0204

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-08 | **Client Sample Name:** 5367, MW-5, 9/30/2010 10:06:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	88.9	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 18:57	KEA	MS-V10	1	BTJ0204

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Project: 5367
Project Number: 4512941504
Project Manager: Anju Farfan

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-09 | **Client Sample Name:** 5367, MW-7, 9/30/2010 11:10:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	88.6	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.4	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 18:39	KEA	MS-V10	1	BTJ0204

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Project: 5367
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Project Manager: Anju Farfan

EDB/DBCP Analysis (EPA Method 504.1)

BCL Sample ID: 1013706-10 | **Client Sample Name:** 5367, MW-1, 9/30/2010 10:48:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Ethylene dibromide	ND	ug/L	0.010	EPA-504.1	ND		1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-504.1	10/12/10	10/12/10 16:28	VH1	GC-4	0.946	BTJ0729

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1013706-10 | **Client Sample Name:** 5367, MW-1, 9/30/2010 10:48:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**6.9**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
1,2-Dibromoethane	ND	ug/L	5.0	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	ug/L	5.0	EPA-8260	ND	A01	1
Ethylbenzene	**510**	**ug/L**	**5.0**	**EPA-8260**	**ND**	**A01**	1
Methyl t-butyl ether	ND	ug/L	5.0	EPA-8260	ND	A01	1
Toluene	ND	ug/L	5.0	EPA-8260	ND	A01	1
Total Xylenes	**38**	**ug/L**	**10**	**EPA-8260**	**ND**	**A01**	1
Total Purgeable Petroleum Hydrocarbons	**6600**	**ug/L**	**500**	**Luft-GC/MS**	**ND**	**A01**	1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	92.2	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	10/05/10	10/05/10 18:21	KEA	MS-V10	10	BTJ0204

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EDB/DBCP Analysis (EPA Method 504.1)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTJ0729						
Ethylene dibromide	BTJ0729-BLK1	ND	ug/L	0.010		

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EDB/DBCP Analysis (EPA Method 504.1)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTJ0729										
Ethylene dibromide	BTJ0729-BS1	LCS	0.34953	0.35714	ug/L	97.9		59 - 140		

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EDB/DBCP Analysis (EPA Method 504.1)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTJ0729	Used client sample: N										
Ethylene dibromide	MS	1013191-46	ND	0.32239	0.35714	ug/L		90.3		51 - 141	
	MSD	1013191-46	ND	0.35430	0.35714	ug/L	9.4	99.2	30	51 - 141	

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTJ0204						
Benzene	BTJ0204-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BTJ0204-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BTJ0204-BLK1	ND	ug/L	0.50		
Ethylbenzene	BTJ0204-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BTJ0204-BLK1	ND	ug/L	0.50		
Toluene	BTJ0204-BLK1	ND	ug/L	0.50		
Total Xylenes	BTJ0204-BLK1	ND	ug/L	1.0		
Total Purgeable Petroleum Hydrocarbons	BTJ0204-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BTJ0204-BLK1	103	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTJ0204-BLK1	98.8	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTJ0204-BLK1	98.3	%	86 - 115 (LCL - UCL)		

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Project Number: 4512941504
Project Manager: Anju Farfan

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTJ0204										
Benzene	BTJ0204-BS1	LCS	25.550	25.000	ug/L	102		70 - 130		
Toluene	BTJ0204-BS1	LCS	27.460	25.000	ug/L	110		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTJ0204-BS1	LCS	10.100	10.000	ug/L	101		76 - 114		
Toluene-d8 (Surrogate)	BTJ0204-BS1	LCS	10.140	10.000	ug/L	101		88 - 110		
4-Bromofluorobenzene (Surrogate)	BTJ0204-BS1	LCS	10.060	10.000	ug/L	101		86 - 115		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTJ0204	Used client sample: N										
Benzene	MS	1013191-51	ND	26.930	25.000	ug/L		108		70 - 130	
	MSD	1013191-51	ND	22.590	25.000	ug/L	17.5	90.4	20	70 - 130	
Toluene	MS	1013191-51	ND	28.420	25.000	ug/L		114		70 - 130	
	MSD	1013191-51	ND	24.080	25.000	ug/L	16.5	96.3	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1013191-51	ND	10.140	10.000	ug/L		101		76 - 114	
	MSD	1013191-51	ND	10.370	10.000	ug/L		104		76 - 114	
Toluene-d8 (Surrogate)	MS	1013191-51	ND	9.9100	10.000	ug/L		99.1		88 - 110	
	MSD	1013191-51	ND	10.020	10.000	ug/L		100		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1013191-51	ND	10.080	10.000	ug/L		101		86 - 115	
	MSD	1013191-51	ND	9.7600	10.000	ug/L		97.6		86 - 115	

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Reported: 10/13/2010 14:46
Project: 5367
Project Number: 4512941504
Project Manager: Anju Farfan

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A20	Surrogate is low due to matrix interference. Interference verified through second extraction/analysis.
S09	The surrogate recovery on the sample for this compound was not within the control limits.

ATTACHMENT 5

PEG 1998 Soil Analyticals
(18 pp)

Table 1
Soil Analytical Data

76 Service Station 5367
500 Bancroft Avenue at Dowling Boulevard
San Leandro, California

Sample ID	Sample Depth (feet)	Date Sampled	TPPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Total Xylenes (ppm)	TEPH as Diesel (ppm)	MtBE (ppm)	TTLC Lead (ppm)
In-Situ Soil Samples:										
P-1	3	10/26/98	ND	ND	ND	ND	ND	3.1(1)	ND	10
P-2	4	10/26/98	ND	ND	ND	ND	ND	ND	ND	10
P-3	5-1/2	10/26/98	ND	ND	ND	ND	ND	1.8(1)	ND	8.8
P-4	5	10/26/98	ND	ND	ND	ND	ND	1.0(1)	ND	8.6
P-5	4-1/2	10/26/98	ND	ND	ND	ND	ND	ND	ND	6.8
P-6	4	10/26/98	ND	ND	ND	ND	ND	ND	ND	9.2
Stockpiled Soil Samples:										
SP(1-4)	NA	10/26/98	ND	ND	ND	ND	0.040	ND	ND	11

TPPH = Total purgeable petroleum hydrocarbons
MtBE = Methyl tert-butyl ether
TEPH = Total *extractable petroleum hydrocarbons*
TTLC = Total threshold limit concentration
ppm = Parts per million
ND = Not detected
NA = Not applicable
(1) = Atypical chromatograph pattern reported by analytical laboratory.
Detection limits are indicated in certified analytical reports.

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-1	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 11/03/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/04/98
Attention: Tina Berry	Lab Number: 9810I77-01	Reported: 11/06/98

QC Batch Number: GC110398BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100
4-Bromofluorobenzene	60	140	78

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-1	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 10/29/98
	Analysis Method: EPA 8015 Mod	Analyzed: 11/03/98
Attention: Tina Berry	Lab Number: 9810I77-01	Reported: 11/06/98

QC Batch Number: GC1029980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	3.1
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	80

Analytes reported as N.D. were not present above the stated limit of detection.

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-2	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 11/03/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/04/98
Attention: Tina Berry	Lab Number: 9810177-02	Reported: 11/06/98

QC Batch Number: GC110398BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	107
4-Bromofluorobenzene	60	140	90

Analytes reported as N.D. were not present above the stated limit of detection.

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-2	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 10/29/98
	Analysis Method: EPA 8015 Mod	Analyzed: 11/03/98
Attention: Tina Berry	Lab Number: 9810177-02	Reported: 11/06/98

QC Batch Number: GC1029980HBPEXC
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	99

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-3	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 11/03/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/04/98
Attention: Tina Berry	Lab Number: 9810177-03	Reported: 11/06/98

QC Batch Number: GC110398BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101
4-Bromofluorobenzene	60	140	88

Analytes reported as N.D. were not present above the stated limit of detection.

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-3	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 10/29/98
	Analysis Method: EPA 8015 Mod	Analyzed: 11/03/98
Attention: Tina Berry	Lab Number: 9810177-03	Reported: 11/06/98

QC Batch Number: GC1029980HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.8
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	97

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-4	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 11/03/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/04/98
Attention: Tina Berry	Lab Number: 9810177-04	Reported: 11/06/98

QC Batch Number: GC110398BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101
4-Bromofluorobenzene	60	140	93

Analytes reported as N.D. were not present above the stated limit of detection.

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-4	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 10/29/98
	Analysis Method: EPA 8015 Mod	Analyzed: 11/03/98
Attention: Tina Berry	Lab Number: 9810177-04	Reported: 11/06/98

QC Batch Number: GC1029980HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.0
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	90

Analytes reported as N.D. were not present above the stated limit of detection.

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-5	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 11/03/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/04/98
Attention: Tina Berry	Lab Number: 9810177-05	Reported: 11/06/98

QC Batch Number: GC110398BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97
4-Bromofluorobenzene	60	140	80

Analytes reported as N.D. were not present above the stated limit of detection.

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-5	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 10/29/98
	Analysis Method: EPA 8015 Mod	Analyzed: 11/03/98
Attention: Tina Berry	Lab Number: 9810177-05	Reported: 11/06/98

QC Batch Number: GC1029980HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	*Control Limits %*		*% Recovery*
n-Pentacosane (C25)	50	150	88

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-6	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 11/03/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/04/98
Attention: Tina Berry	Lab Number: 9810177-06	Reported: 11/06/98

QC Batch Number: GC110398BTEXEXB
Instrument ID: GCHP7

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102
4-Bromofluorobenzene	60	140	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: P-6	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 10/29/98
	Analysis Method: EPA 8015 Mod	Analyzed: 11/03/98
Attention: Tina Berry	Lab Number: 9810177-06	Reported: 11/06/98

QC Batch Number: GC1029980HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	77

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: SP(1-4) Comp	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 11/03/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/05/98
Attention: Tina Berry	Lab Number: 9810177-07	Reported: 11/06/98

QC Batch Number: GC110398BTEXEXB
Instrument ID: GCHP31

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	**0.0050**	**0.040**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99
4-Bromofluorobenzene	60	140	90

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

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Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Sampled: 10/26/98
2025 Gateway Place, Suite 440	Sample Descript: SP(1-4) Comp	Received: 10/27/98
San Jose, CA 95110	Matrix: SOLID	Extracted: 10/29/98
	Analysis Method: EPA 8015 Mod	Analyzed: 11/03/98
Attention: Tina Berry	Lab Number: 9810177-07	Reported: 11/06/98

QC Batch Number: GC1029980HBPEXC
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	93

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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Pacific Environmental Group
2025 Gateway Place, Ste. 440
San Jose, CA 95110
Attention: Tina Berry

Client Project ID: 311-127.1B/5367, 500 Bancroft

QC Sample Group: 9810177

Reported: Nov 6, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid			
Method:	EPA 8020			
Analyst:	G.P.			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC110398BTEXEXB			
Sample No.:	9810177-3			
Date Prepared:	11/3/98	11/3/98	11/3/98	11/3/98
Date Analyzed:	11/4/98	11/4/98	11/4/98	11/4/98
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Sample Conc., mg/Kg:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Matrix Spike, mg/Kg:	0.20	0.20	0.20	0.59
% Recovery:	100	100	100	98
Matrix Spike Duplicate, mg/Kg:	0.20	0.20	0.21	0.60
% Recovery:	100	100	105	100
Relative % Difference:	0.0	0.0	4.9	2.0
RPD Control Limits:	0-25	0-25	0-25	0-25
LCS Batch#:	GC110398BTEXEXB			
Date Prepared:	11/3/98	11/3/98	11/3/98	11/3/98
Date Analyzed:	11/4/98	11/4/98	11/4/98	11/4/98
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Recovery, mg/Kg:	0.22	0.21	0.21	0.66
LCS % Recovery:	110	105	105	110

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Ste. 440
San Jose, CA 95110
Attention: Tina Berry

Client Project ID: 311-127.1B/5367, 500 Bancroft

QC Sample Group: 9810177

Reported: Nov 6, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015M
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC1029980HBPEXC

Sample No.:	9810183-5
Date Prepared:	10/28/98
Date Analyzed:	10/30/98
Instrument I.D.#:	GCHP5B
Sample Conc., mg/Kg:	10 mg/Kg
Conc. Spiked, mg/Kg:	17
Matrix Spike, mg/Kg:	20
% Recovery:	59
Matrix Spike Duplicate, mg/Kg:	23
% Recovery:	76
Relative % Difference:	25
RPD Control Limits:	0-50

THE MS AND MSD ARE REFERED FROM GC1028980HBPEXB.

LCS Batch#: BLK102998CS

Date Prepared:	10/29/98
Date Analyzed:	11/3/98
Instrument I.D.#:	GCHP4B
Conc. Spiked, mg/Kg:	17
Recovery, mg/Kg:	17
LCS % Recovery:	100

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 311-127.1B/5367, 500 Bancoft	Received: 10/27/98
2025 Gateway Place, Suite 440		
San Jose, CA 95110	Lab Proj. ID: 9810177	Reported: 11/06/98
Attention: Tina Berry		

LABORATORY NARRATIVE

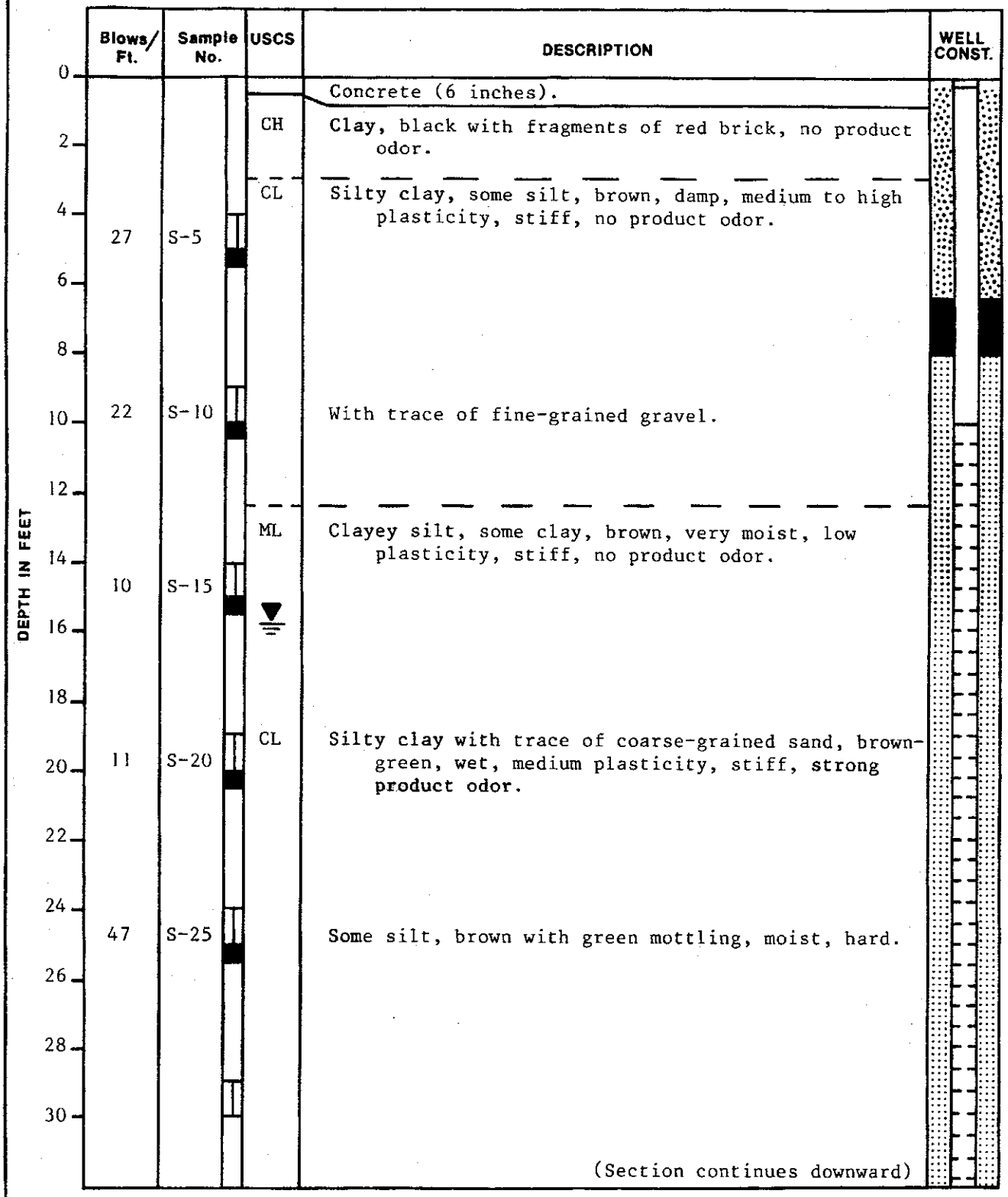
In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 20 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

ATTACHMENT 6

Historical Boring Logs
(20 pp)



Applied GeoSystems
41255 Sissom Blvd. Suite B Fremont, CA 94539 (415) 651-1906

PROJECT NO. 87091-1

LOG OF BORING B-1/MW-1

UNOCAL Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE P-4

DEPTH IN FEET	Blows/ Ft.	Sample No.	USCS	DESCRIPTION	WELL CONST.
30	25	S-30	CL	Silty clay, some silt, brown with green mottling, moist, medium plasticity, very stiff, strong product odor.	
32					
34	28	S-35			
36				Total Depth = 36 feet. Boring terminated at sufficient depth to evaluate contamination above and below water table.	
38					
40					

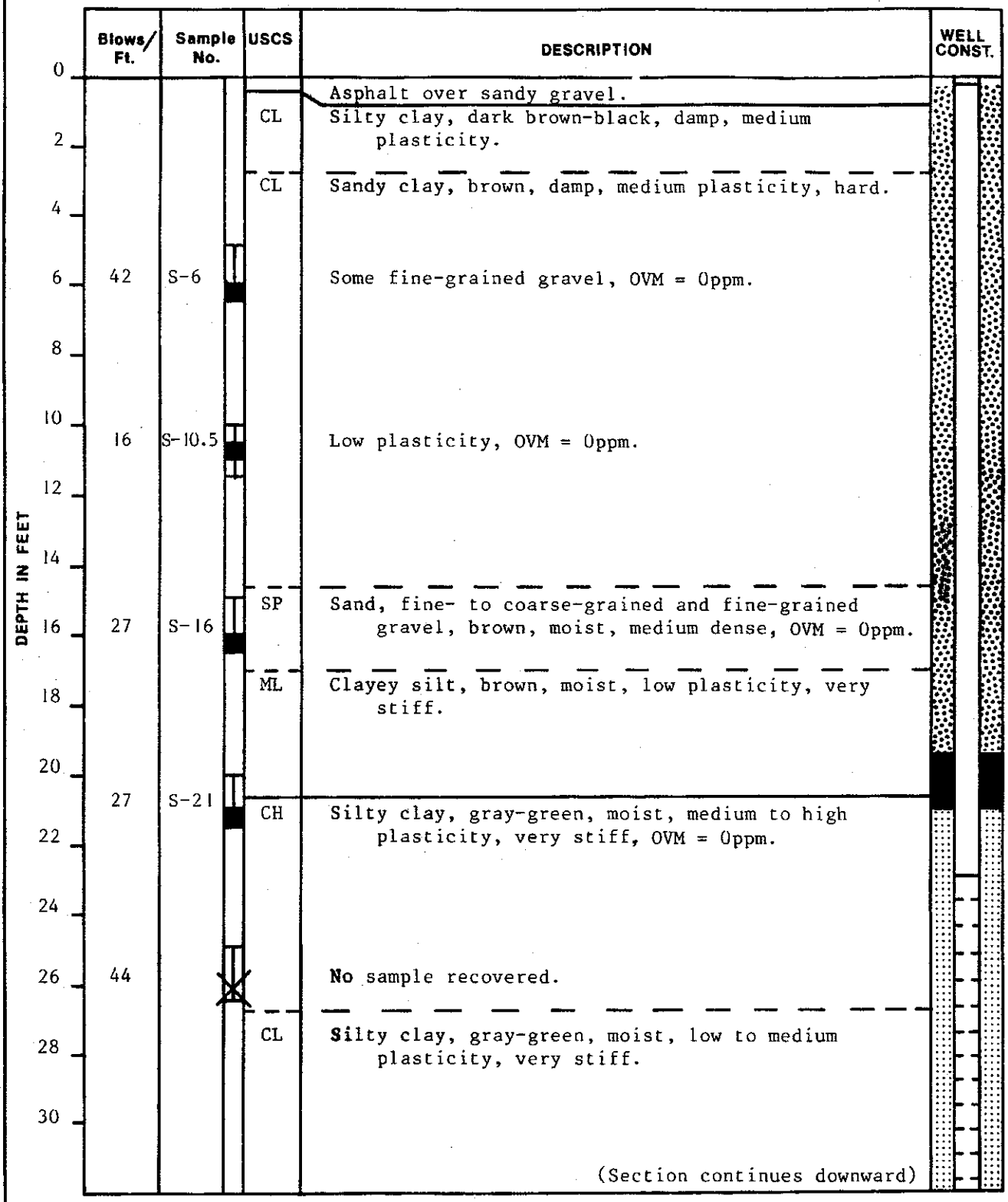
Applied GeoSystems
41255 Mission Blvd. Suite B Fremont, CA 94539 (415) 651-1906

LOG OF BORING B-1/MW-1

UNOCAL Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE P-5

PROJECT NO. 87091-1



Applied GeoSystems
41255 Mission Blvd Suite B Fremont, CA 94539 (415) 651-1906

PROJECT NO. 87091-3

LOG OF BORING B-2/MW-2

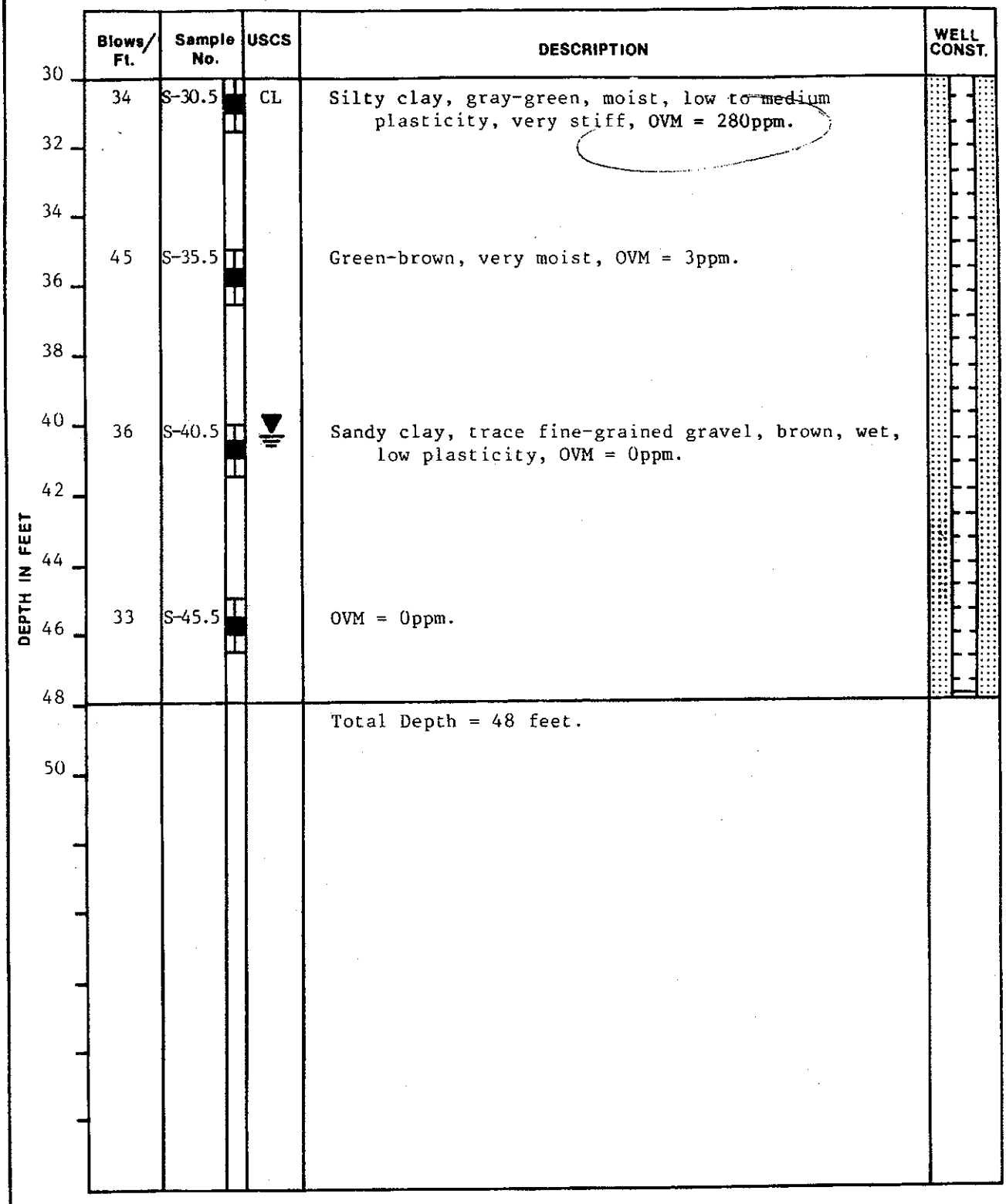
UNOCAL Station No. 5367

500 Bancroft Avenue

San Leandro, California

PLATE

P - 4



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LOG OF BORING B-2/MW-2

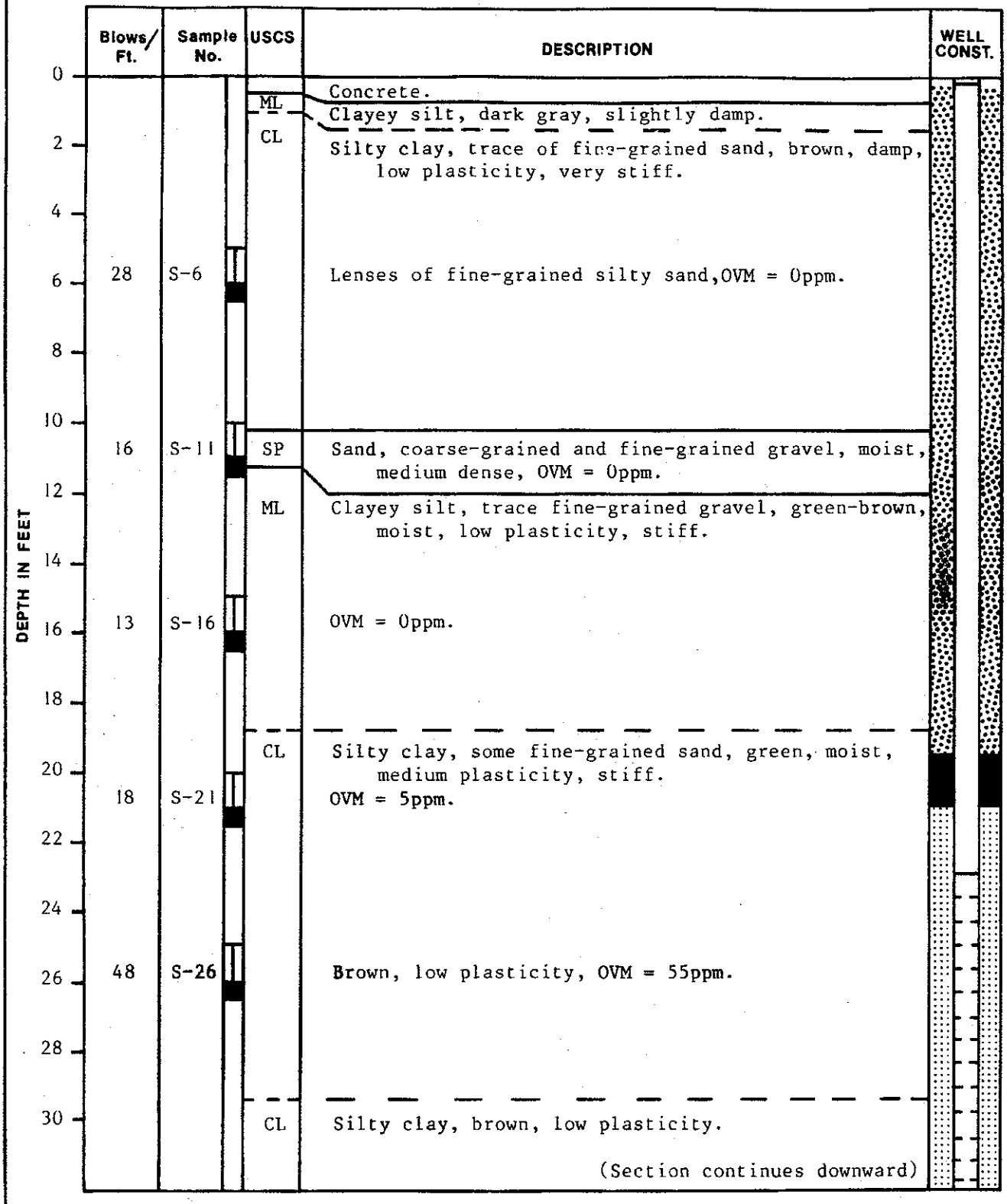
UNOCAL Station No. 5367

500 Bancroft Avenue

San Leandro, California

PLATE P - 5

PROJECT NO. 87091-3



Applied GeoSystems

PROJECT NO. 87091-3

LOG OF BORING B-3/MW-3

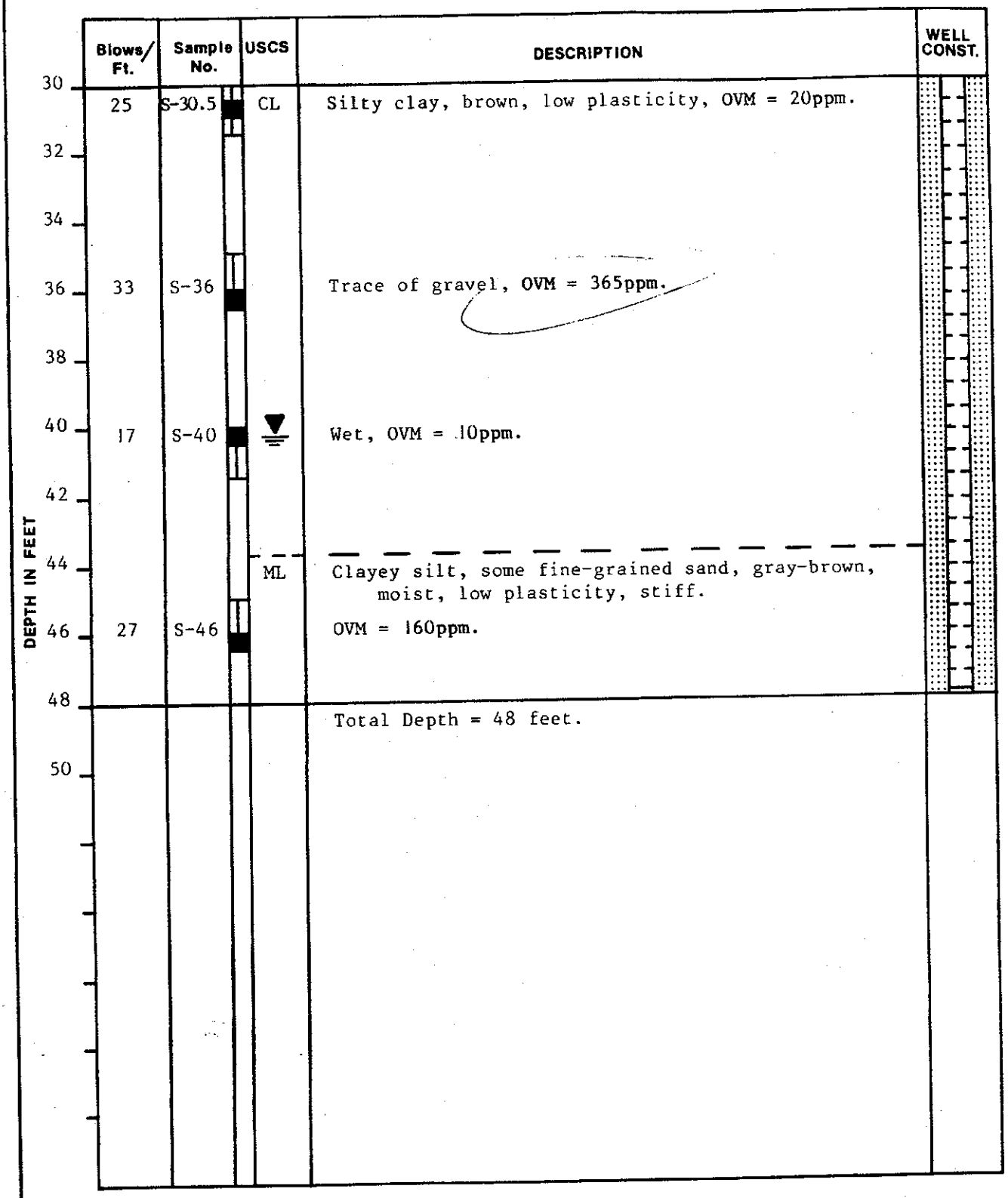
UNOCAL Station No. 5367

500 Bancroft Avenue

San Leandro, California

PLATE

P - 6



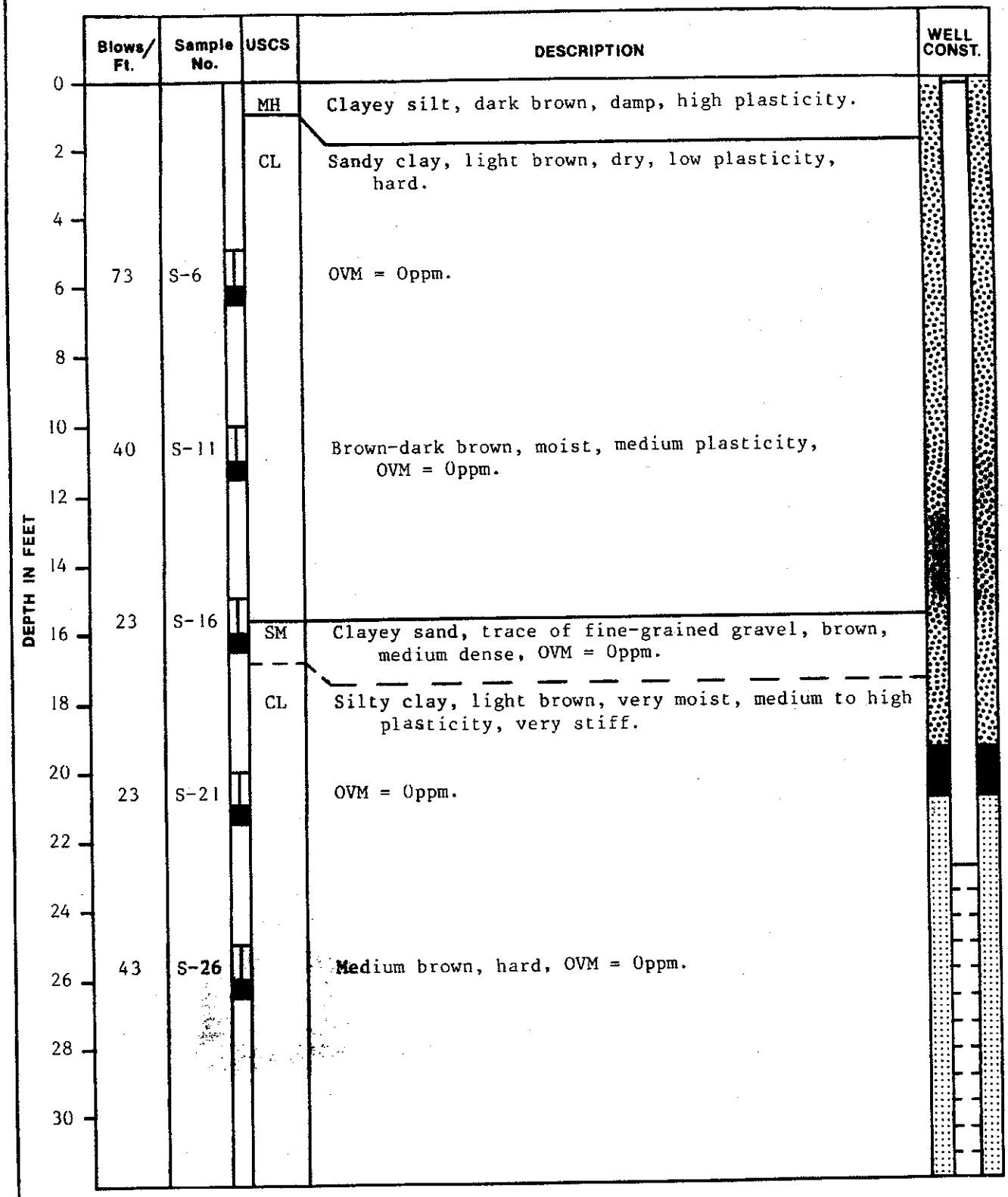
Applied GeoSystems
43255 Mission Blvd Suite B Fremont CA 94539 (415) 651-1906

PROJECT NO. 87091-3

LOG OF BORING B-3/MW-3

UNOCAL Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE
P - 7



Applied GeoSystems

LOG OF BORING B-4/MW-4

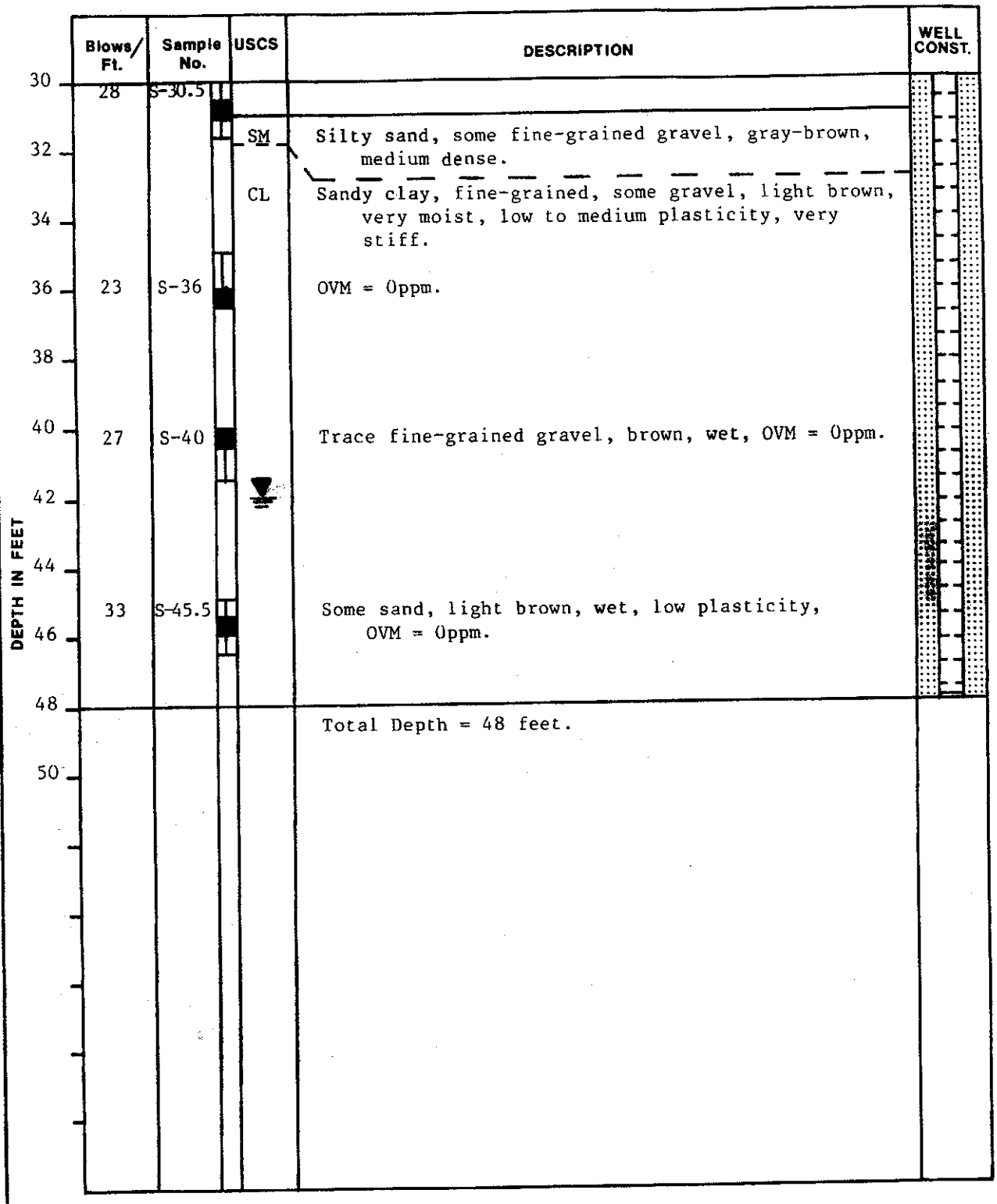
UNOCAL Station No. 5367

500 Bancroft Avenue

San Leandro, California

PLATE P-8

PROJECT NO. 87091-3



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PROJECT NO. 87091-3

LOG OF BORING B-4/MW-4

UNOCAL Station No. 5367

500 Bancroft Avenue

San Leandro, California

PLATE

P - 9

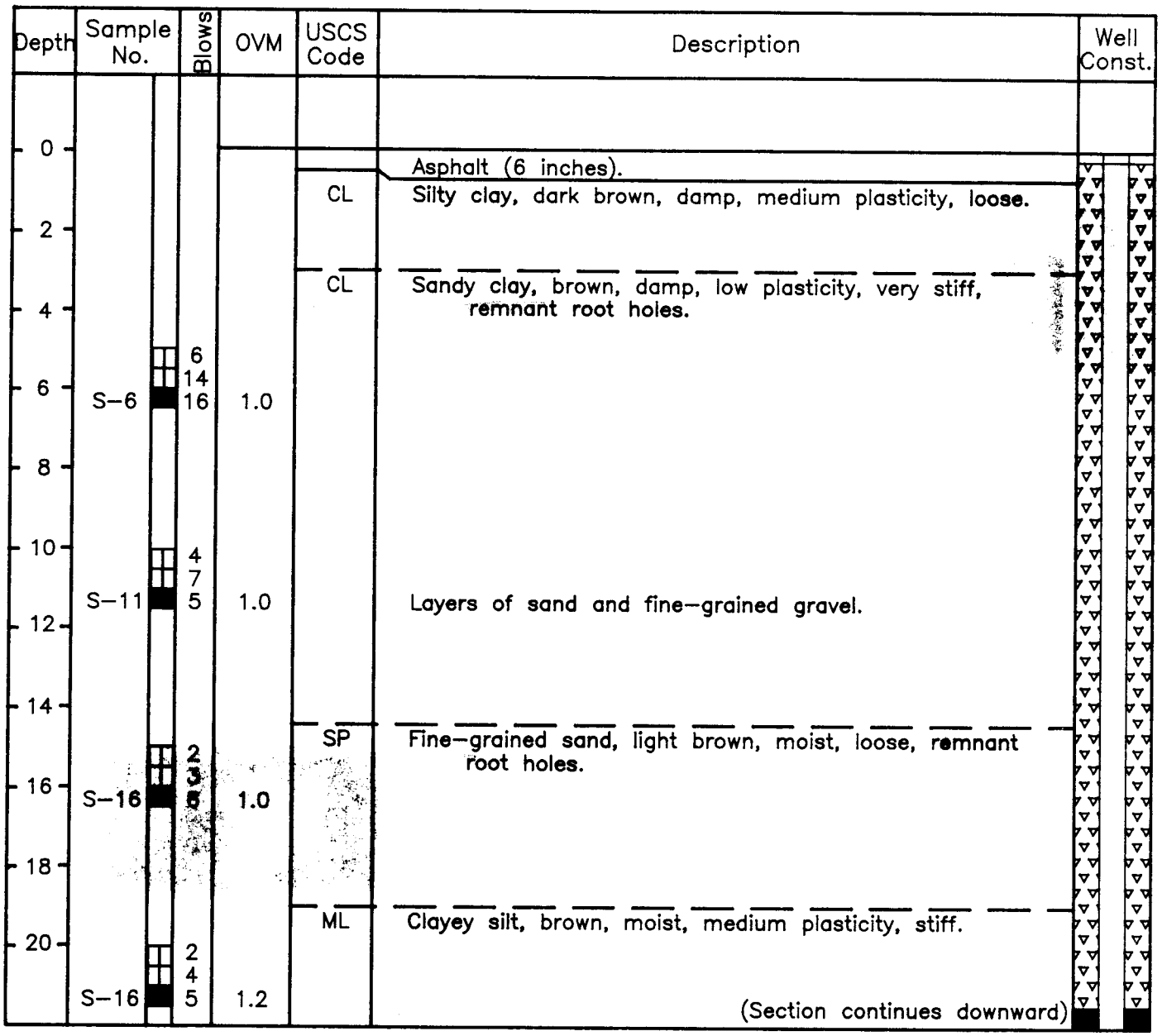
Total depth of boring: 46-1/2 feet **Diameter of boring:** 8 inches **Date drilled:** 5-15-89

Casing diameter: 2 inches **Length:** 45 feet **Slot size:** 0.020-inch

Screen diameter: 2 inches **Length:** 20 feet **Material type:** Sch 40 PVC

Drilling Company: HEW Drilling, Inc. **Driller:**

Method Used: Hollow-Stem Auger **Field Geologist:** James Orr



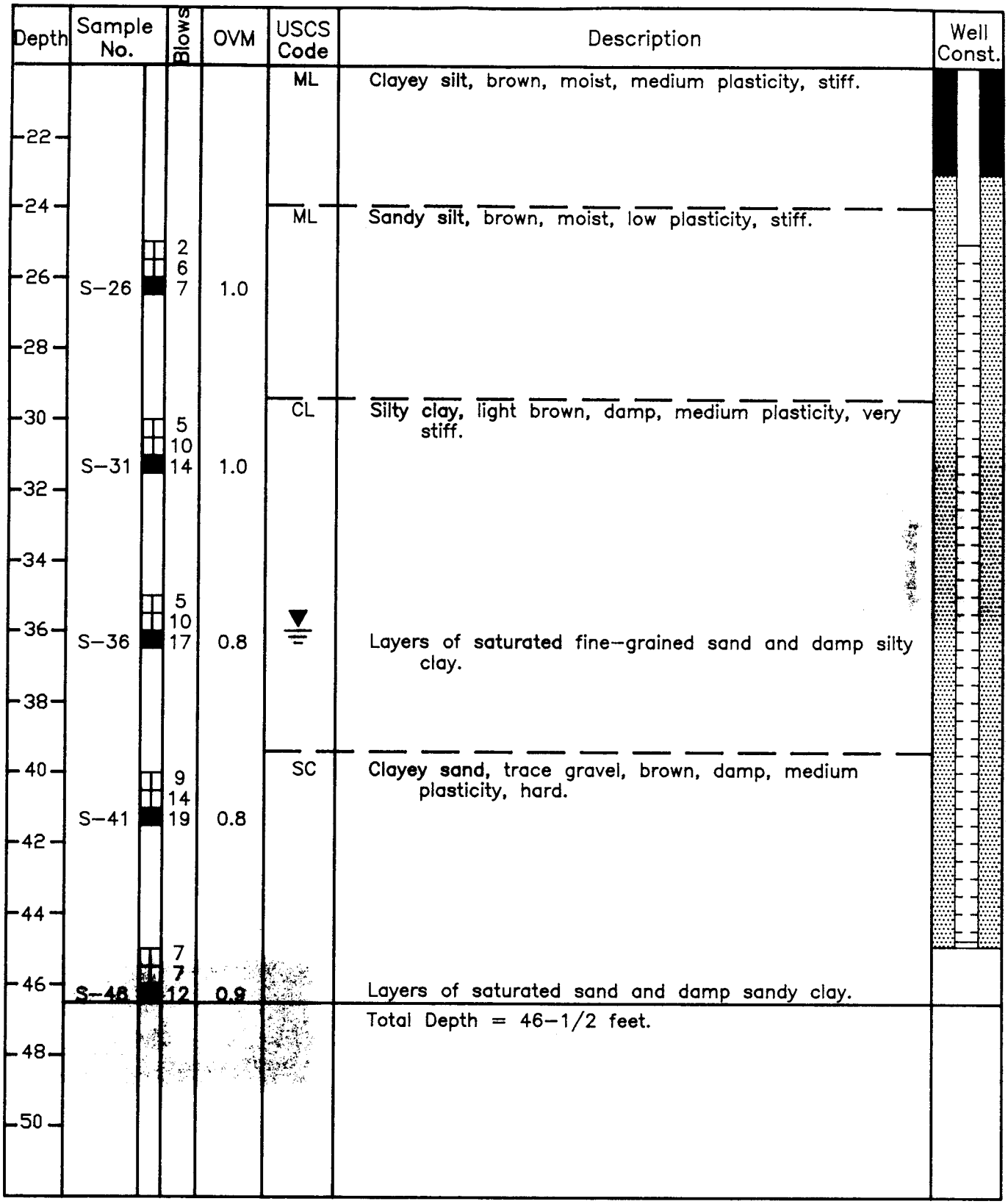
Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-5/MW-5

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE
5



Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-5/MW-5

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE 6

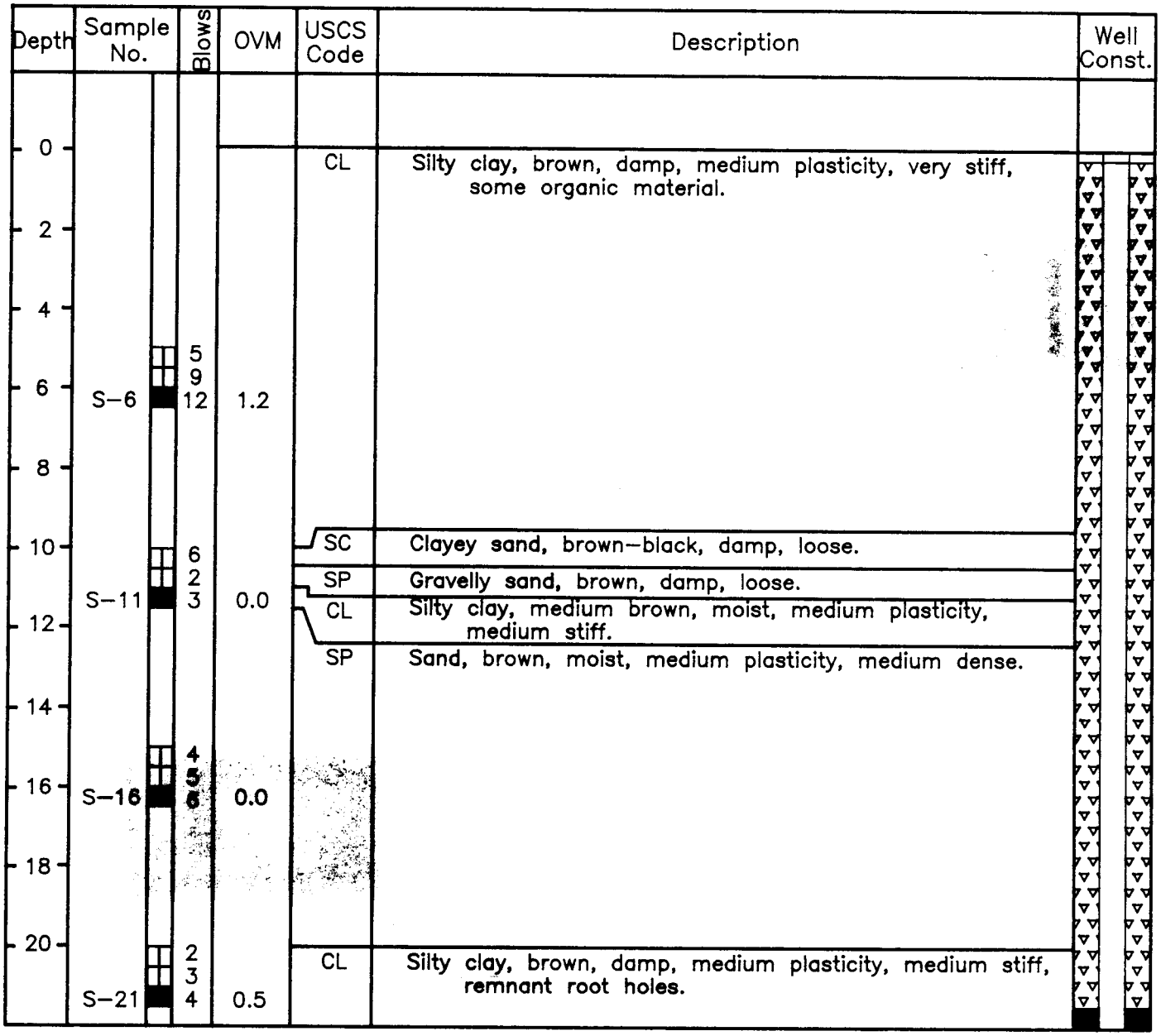
Total depth of boring: 46-1/2 feet **Diameter of boring:** 8 inches **Date drilled:** 5-15-89

Casing diameter: 2 inches **Length:** 45 feet **Slot size:** 0.020-inch

Screen diameter: 2 inches **Length:** 20 feet **Material type:** Sch 40 PVC

Drilling Company: HEW Drilling, Inc. **Driller:** Anibal

Method Used: Hollow-Stem Auger **Field Geologist:** James Orr



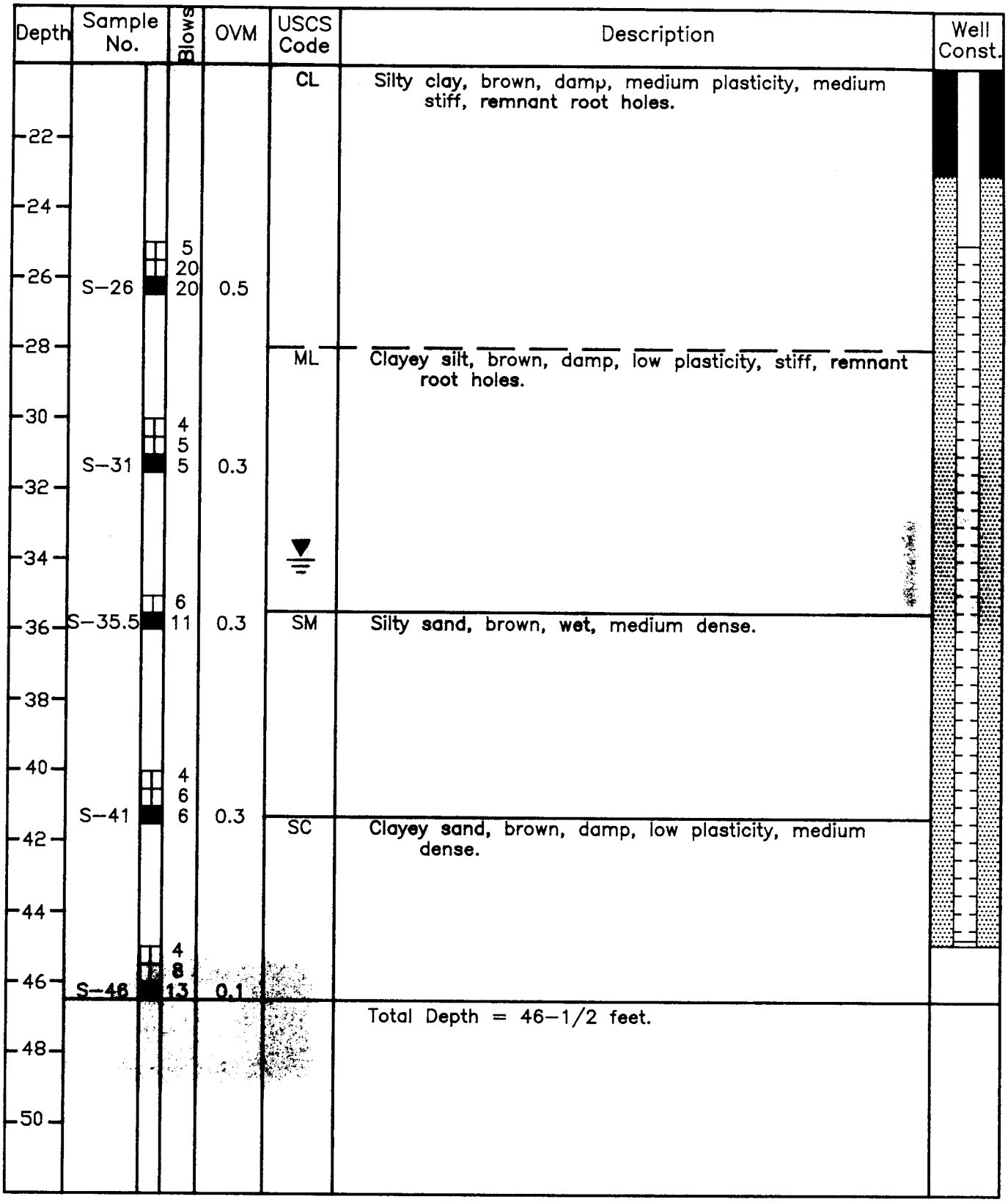
Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-6/MW-6

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE 7



Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-6/MW-6

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE 8

Total depth of boring: 44 feet **Diameter of boring:** 8 inches **Date drilled:** 2-7-90

Casing diameter: 2 inches **Length:** 44 feet **Slot size:** 0.020-inch

Screen diameter: 2 inches **Length:** 20 feet **Material type:** Sch 40 PVC

Drilling Company: HEW Drilling, Inc. **Driller:** Tomas and Perfecto

Method Used: Hollow-Stem Auger **Field Geologist:** Russell Bak

Depth	Sample No.	Blows	OVM	USCS Code	Description	Well Const.
0						
2				CL	Silty clay, dark brown, damp, medium to high plasticity, very stiff. Layers of sand and fine-grained gravel.	
4						
6	S-5.5	8 14	0.2			
8						
10	S-10.5	8 14	0.2		Sandy clay, trace gravel, brown, medium plasticity.	
12						
14						
16	S-16	3 7 10	0.2			
18						
20	S-21	6 9 13	0		(Section continues downward)	

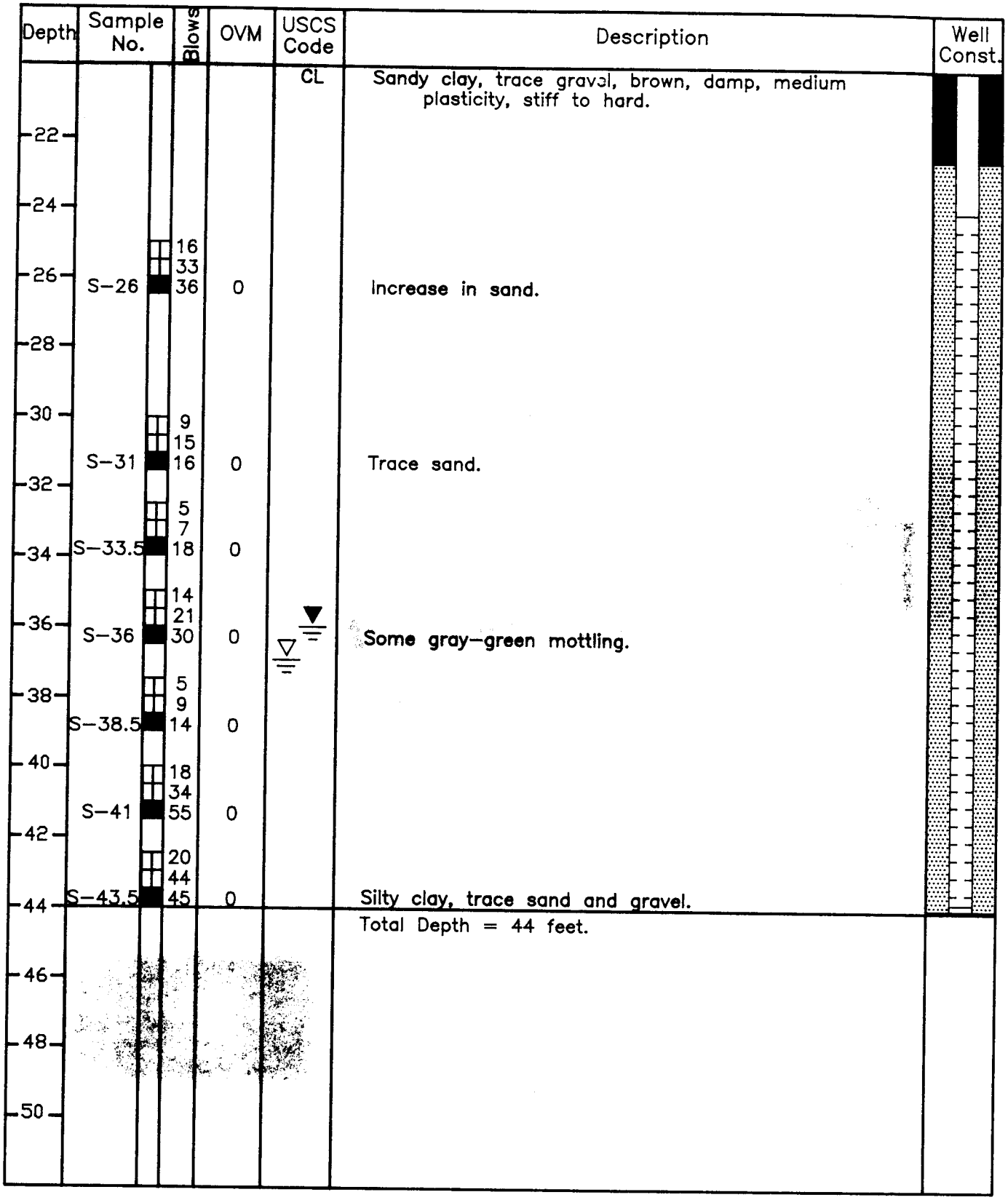
Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-7/MW-7

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE 9



Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-7/MW-7

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE

10

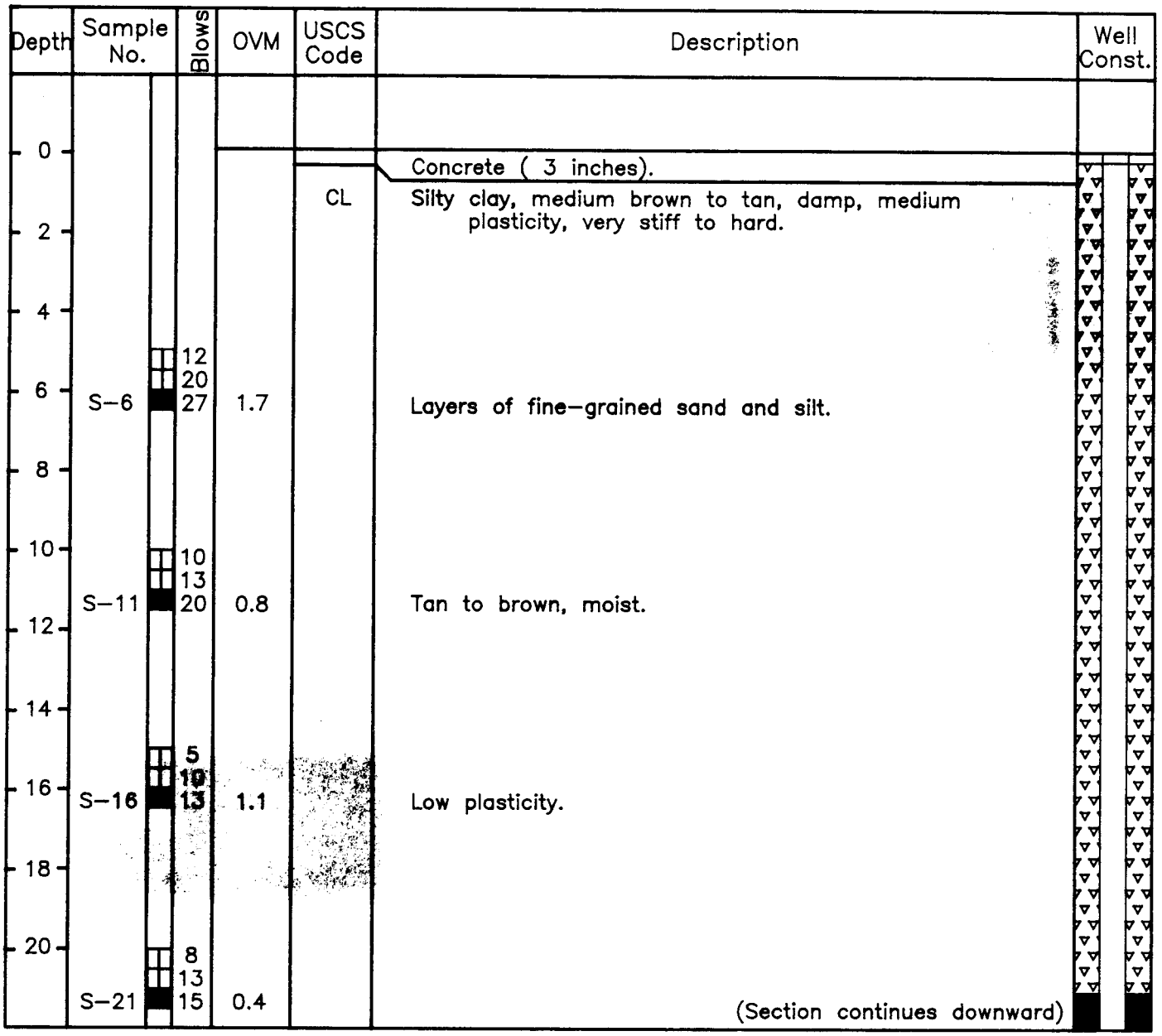
Total depth of boring: 44 feet **Diameter of boring:** 8 inches **Date drilled:** 2-6-90

Casing diameter: 2 inches **Length:** 44 feet **Slot size:** 0.020-inch

Screen diameter: 2 inches **Length:** 20 feet **Material type:** Sch 40 PVC

Drilling Company: HEW Drilling, Inc. **Driller:** Tomas and Perfecto

Method Used: Hollow-Stem Auger **Field Geologist:** Russell Bak



Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-8/MW-8

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE 11

Depth	Sample No.	Blows	OVM	USCS Code	Description	Well Const.
22				CL	Silty clay, tan to brown, moist, low plasticity, very stiff to hard.	
24						
26	S–26	8 28 32	1.1			
28						
30		8 13				
32	S–31	18	6.3	ML	Silt, tan to brown, damp, low to medium plasticity, very dense, noticeable odor.	
34						
36	S–36	12 28 50	10.1	CL	Silty clay, trace rock fragments, brown, damp, medium plasticity, hard, trace mottling.	
38		15 25				
40	S–38.5	35	3.1	ML	Sandy silt, trace sand and gravel, brown, moist, low plasticity, hard, trace mottling.	
42	S–41	20 25 38	1.3	GC	Clayey gravel, some sand, gray–brown, wet, dense.	
44	S–43.5	9 11 20	3	CL	Sandy clay, trace gravel, brown, damp, low to medium plasticity, very stiff.	
46					Total Depth = 44 feet.	
48						
50						

Applied GeoSystems

PROJECT NO. 87091-4

LOG OF BORING B-8/MW-8

Unocal Station No. 5367
500 Bancroft Avenue
San Leandro, California

PLATE 12

GeoResearch

FIELD LOG OF BORING

BORING/WELL I.D. MW9
SHEET 1 OF 2

PROJECT NAME	PROJECT NUMBER	ELEVATION AND DATUM	REFERENCE
UNOCAL SAN LEANDRO	9480600100	NA	NA

DRILLING COMPANY	DRILLER	DATE & TIME STARTED	DATE & TIME COMPLETED
BAYLAND DRILLING	KURT VOSS'	12/16/94 11:20 AM	12/16/94

DRILLING EQUIPMENT METHOD	DIRECTION OF BORING	TOTAL DEPTH OF BORING
CME-75	[x] VERTICAL [ ] SLANT _____ DEG. FROM VERT	45 FT.

SIZE AND TYPE OF BIT	TOTAL NO. OF SAMPLES	BULK	SS	OTHER
8" HOLLOW STEM AUGER	1		1	

DRILLING FLUID	WATER LEVEL	FIRST	AFTER HOURS
NONE			

SAMPLER	HYDROGEOLOGIST/DATE	CHECKED BY/DATE
TYPE CAL MOD DRIVING WT. 130 DROP 30"	MICHAEL GUY 12/16/94	

DEPTH (FEET)	WELL CONST CSG	WELL CONST FILL	OVA (PPM)	SAMPLES NO.	SAMPLES TYPE	SAMPLES BLOWS /6"	GRAPH. LOG	SOIL CLASS (USCS)	DESCRIPTION OF MATERIALS	REMARKS
								AF	ASPHALT	
								CL	**SILTY CLAY**, moderate yellowish-brown, stiff, moist, low to medium plasticity, minor fine to coarse sand.	
									Becomes low plasticity at 4.5 ft.	
5										
10										
15										
20									Becomes clay between 23-25 ft. and [redacted]	
25										

GeoResearch

FIELD LOG OF BORING

BORING/WELL I.D. MW9
SHEET 2 OF 2

PROJECT NAME	PROJECT NUMBER	HYDROGEOLOGIST	CHECKED BY/DATE
UNOCAL SAN LEANDRO	9480600100	MICHAEL GUY 12/16/94	

DEPTH (FEET)	WELL CONST CSG	WELL CONST FILL	OVA (PPM)	SAMPLES NO.	SAMPLES TYPE	SAMPLES BLOWS /6"	GRAPH. LOG	SOIL CLASS (USCS)	DESCRIPTION OF MATERIALS	REMARKS
								CL	SILTY CLAY, yellowish-brown, stiff, moist, low plasticity, minor to coarse sand.	
			0			2 3 5		ML	SILT, moderate yellowish-brown, stiff, [redacted]	
30										
35										
40										
45									Boring terminated at 4 ft.	

GeoResearch

FIELD LOG OF BORING

BORING/WELL I.D. MW10
SHEET 1 OF 2

PROJECT NAME	PROJECT NUMBER	ELEVATION AND DATUM	REFERENCE
UNOCAL SAN LEANDRO	9480600100		

DRILLING COMPANY	DRILLER	DATE & TIME STARTED	DATE & TIME COMPLETED
BAYLAND DRILLING	KURT VOSS	4/6/95 10:30	4/6/95 12:30

DRILLING EQUIPMENT METHOD	DIRECTION OF BORING	TOTAL DEPTH OF BORING
CME-75	[x] VERTICAL [ ] SLANT _____ DEG. FROM VERT	45 FT BGS.

SIZE AND TYPE OF BIT	TOTAL NO. OF SAMPLES	BULK	SS	OTHER
8" HOLLOW-STEM AUGER	1		1	

DRILLING FLUID	WATER LEVEL	FIRST	AFTER HOURS
NONE			

SAMPLER	HYDROGEOLOGIST/DATE	CHECKED BY/DATE
TYPE CAL MOD DRIVING WT. 130 DROP 30"	MICHAEL GUY 4/6/95	WARREN GROSS

DEPTH (FEET)	WELL CONST CSG	WELL CONST FILL	OVA (PPM)	SAMPLES NO.	SAMPLES TYPE	SAMPLES BLOWS /6"	GRAPH. LOG	SOIL CLASS (USCS)	DESCRIPTION OF MATERIALS	REMARKS
0								AF	ARTIFICIAL FILL, asphalt.	
								CL	SILTY CLAY, dark yellowish brown, stiff, moist, low plasticity.	
5										
10										
15										
20										
25										

GeoResearch

FIELD LOG OF BORING

BORING/WELL I.D. MW10
SHEET 2 OF 2

PROJECT NAME	PROJECT NUMBER	HYDROGEOLOGIST	CHECKED BY/DATE
UNOCAL SAN LEANDRO	9480600100	MICHAEL GUY 4/6/95	WARREN GROSS

DEPTH (FEET)	WELL CONST CSG	WELL CONST FILL	OVA (PPM)	SAMPLES NO.	SAMPLES TYPE	SAMPLES BLOWS /6"	GRAPH. LOG	SOIL CLASS (USCS)	DESCRIPTION OF MATERIALS	REMARKS
								CL		
30										
35										
40										
45									Boring terminated 45 ft bgs.	