ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

January 31, 2007

Mr. Denis Brown
Shell Oil Products US
20945 S. Wilmington Ave.
Carson, CA 90810-1039

Subject: Fuel Leak Case No. RO0002523, Shell #13-5444, 4530 Las Positas Road, Livermore, CA

Dear Mr. Brown:

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 MTBE is present in soil in the area of the USTs at concentrations up to 0.52 ppm.
- Residual MTBE remains in groundwater at a concentration of 92 ppb in the area directly downgradient from the USTs.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,

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

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

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

Ms. Danielle Stefani (w/enc)
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Ms. Colleen Winey, QIC 80201 (w/enc)
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

City of Livermore Planning Department (w/enc)
1052 South Livermore Avenue
Livermore, CA 94550

Mr. R. Lee Dooley (w/enc)
Delta Environmental Consultants, Inc.
175 Bernal Road, Suite 200
San Jose, CA 95119

Ms. Debbie Arnold (w/enc)
Delta Environmental Consultants, Inc.
175 Bernal Road, Suite 200
San Jose, CA 95119

Jerry Wickham (w/orig enc), D. Drogos (w/enc), File (w/enc)

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January 31, 2007

Mr. Denis Brown
Shell Oil Products US
20945 S. Wilmington Ave.
Carson, CA 90810-1039

REMEDIAL ACTION COMPLETION CERTIFICATE

Dear Mr. Brown:

Subject: Fuel Leak Case No. RO0002523, Shell #13-5444, 4530 Las Positas Road, Livermore, CA

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks 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 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 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: October 17, 2006

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Jerry Wickham	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Shell #13-5444		
Site Facility Address: 4530 Las Positas Road, Livermore, CA 94551		
RB Case No.: ---	Local Case No.: ---	LOP Case No.: RO0002523
URF Filing Date: 03/20/2002	SWEEPS No.: ---	APN: 99-21-18

Responsible Parties	Addresses	Phone Numbers
Denis Brown, Shell Oil Products US	20945 S. Wilmington Avenue, Carson, CA 90810	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	10,000	Gasoline	Not closed	
2	10,000	Gasoline	Not closed	
3	10,000	Gasoline	Not closed	
Piping			Not removed or upgraded	

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. The fuel hydrocarbons and oxygenates were detected in groundwater collected from monitoring wells installed as part of Shell's GRASP program and not as a result of tank, dispenser, or piping removals or upgrades.		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 4	Proper screened interval?
Highest GW Depth Below Ground Surface: 11.3	Lowest Depth: 13.5	Flow Direction: Variable flow direction based on water levels in monitoring wells; regional flow is to the northwest
Most Sensitive Current Use: Drinking water source.		

Summary of Production Wells in Vicinity: Three domestic water supply wells are located approximately 1,800 to 2,000 west northwest from the site. Total depth of the wells ranges from 192 to 335 feet. Based on the localized extent of groundwater contamination within the site, these wells do not appear to be receptors for the site. No other water supply wells are within 2,000 feet of the site. The nearest municipal water supply well is California Water Supply Well 17-01-03S/02E-09l01M located approximately 7,500 feet southwest of the site. Based on the distance from the site and cross gradient location, the municipal supply well does not appear to be a receptor for the site.	
Are drinking water wells affected? No	Aquifer Name: Northwest boundary of Mocho I Subbasin of Livermore-Amador Groundwater Basin
Is surface water affected? No	Nearest SW Name: Arroyo Las Positas is approximately 600 feet northeast of site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and Livermore Pleasanton Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	None	---	---
Piping	None	---	---
Free Product	None	---	---
Soil	None	---	---
Groundwater	None	---	---

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments 1 through 7 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	1.85	<1	<50	<50
TPH (Diesel)	NA	NA	NA	NA
Oil and Grease	NA	NA	NA	NA
Benzene	<0.002	<0.002	<0.5	<0.5
Toluene	<0.002	<0.002	<0.5	<0.5
Ethylbenzene	<0.002	<0.002	<0.5	<0.5
Xylenes	<0.002	<0.002	<0.5	<0.5
Lead	NA	NA	NA	NA
MTBE	0.521(1)	0.521(1)	470(2)	<5(2)
Other (8240/8270)	NA(3)	NA(3)	NA(3)	NA(3)

(1) MTBE = 0.521 ppm; TBA = 0.184 ppm; DIPE, ETBE, TAME, EDB, and EDC <0.002 ppm; ethanol < 0.2 ppm in soil.
(2) MTBE = 470 ppb in MW-4 during groundwater sampling in 09/07/2002; MTBE <0.5 ppb in groundwater from well MW-4 during last nine sampling events since 04/15/2003. TBA <10 ppb; DIPE, ETBE, TAME, EDB, and EDC <0.5 ppb; ethanol <50 ppb in groundwater.
(3) No VOC, SVOC, or other analyses.

Site History and Description of Corrective Actions:

The site is a service station located at the corner of Las Positas Road and First Street. Adjacent land use is commercial with a residential development south of Las Positas Road on a hillside above the site. In September 2001, four monitoring wells were installed at the site as part of Shell's Groundwater Assessment program (GRASP). GRASP is a voluntary program initiated by Shell to install monitoring wells at service stations that do not have active leaking fuel cases but are located in proximity to public water supply wells. The nearest municipal water supply well is California Water Supply Well 17-01-03S/02E-09l01M located approximately 7,500 feet southwest of the site. The nearest water supply wells are three domestic supply wells located approximately 1,800 to 2,000 feet west northwest of the site and an agricultural well located approximately 2,500 feet northeast of the site. During the initial sampling of the four monitoring wells in 2001, MTBE was detected at a concentration of 0.6 ppb in well MW-2 and 16 ppb in well MW-4. No other analytes were detected in the monitoring wells. MTBE, TPHg, BTEX, and other fuel oxygenates have not been detected in groundwater samples collected during the last 9 sampling events (from 07/17/2003 to 07/31/2006).

Five soil borings were advanced at the site in June 2006 to investigate whether soil and groundwater have been affected by possible releases from the dispensers, piping, or tanks at the site. Two borings were advanced adjacent to the USTs, two borings were advanced adjacent to the dispensers, and one boring was advanced in the southern portion of the site. The borings were continuously logged to the total depth of the borings, which ranged from 16 to 20 feet bgs. MTBE was detected in soil samples collected from soil borings SB-2 and SB-5, which are located adjacent to the USTs. MTBE was detected in one of four soil samples collected from boring SB-2 at a concentration of 0.002 ppm and was detected in four of four soil samples collected from boring SB-5 at concentrations ranging from 0.008 to 0.521 ppm. TPHg was detected at relatively low concentrations ranging from 0.11 to 1.85 ppm in soil samples from four of the five soil borings. TBA was detected in two soil samples collected from boring SB-5 at concentrations of 0.07 to 0.18 ppm. BTEX and other fuel oxygenates were not detected in the soil samples.

Grab groundwater samples were collected from the first encountered groundwater in each of the five soil borings advanced at the site in June 2006. MTBE was detected at a concentration of 92 ppb in groundwater collected from boring SB-5, which is located immediately downgradient from the USTs, but was not detected in groundwater samples collected from the remaining soil borings. TPHg, BTEX, lead scavengers, and fuel oxygenates other than MTBE were not detected in the groundwater samples.

Groundwater monitoring was conducted at the site from September 20, 2001 to July 31, 2006. TPHg, BTEX, and fuel oxygenates have not been detected in groundwater samples collected during the last nine groundwater sampling events.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? ---		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? ---		
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: None		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 4
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

MTBE was detected in soil samples collected adjacent to the USTs (boring SB-5) at concentrations that exceed Environmental Screening Levels for groundwater protection. MTBE was also detected in a groundwater sample collected from boring SB-5 at a concentration of 92 ppb. MTBE has not been detected in groundwater samples collected from downgradient well MW-4 during the past nine groundwater sampling events. Therefore, the residual MTBE in soil and groundwater appears to be limited in extent to the immediate area of the USTs and does not pose a threat to groundwater resources in the area.

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 based upon the information available in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham	Title: Hazardous Materials Specialist
Signature: Jerry Wickham	Date: 10/18/06
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: Donna L. Drogos	Date: 10/18/06

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

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature: Cher McCaul	Date: 11/30/06

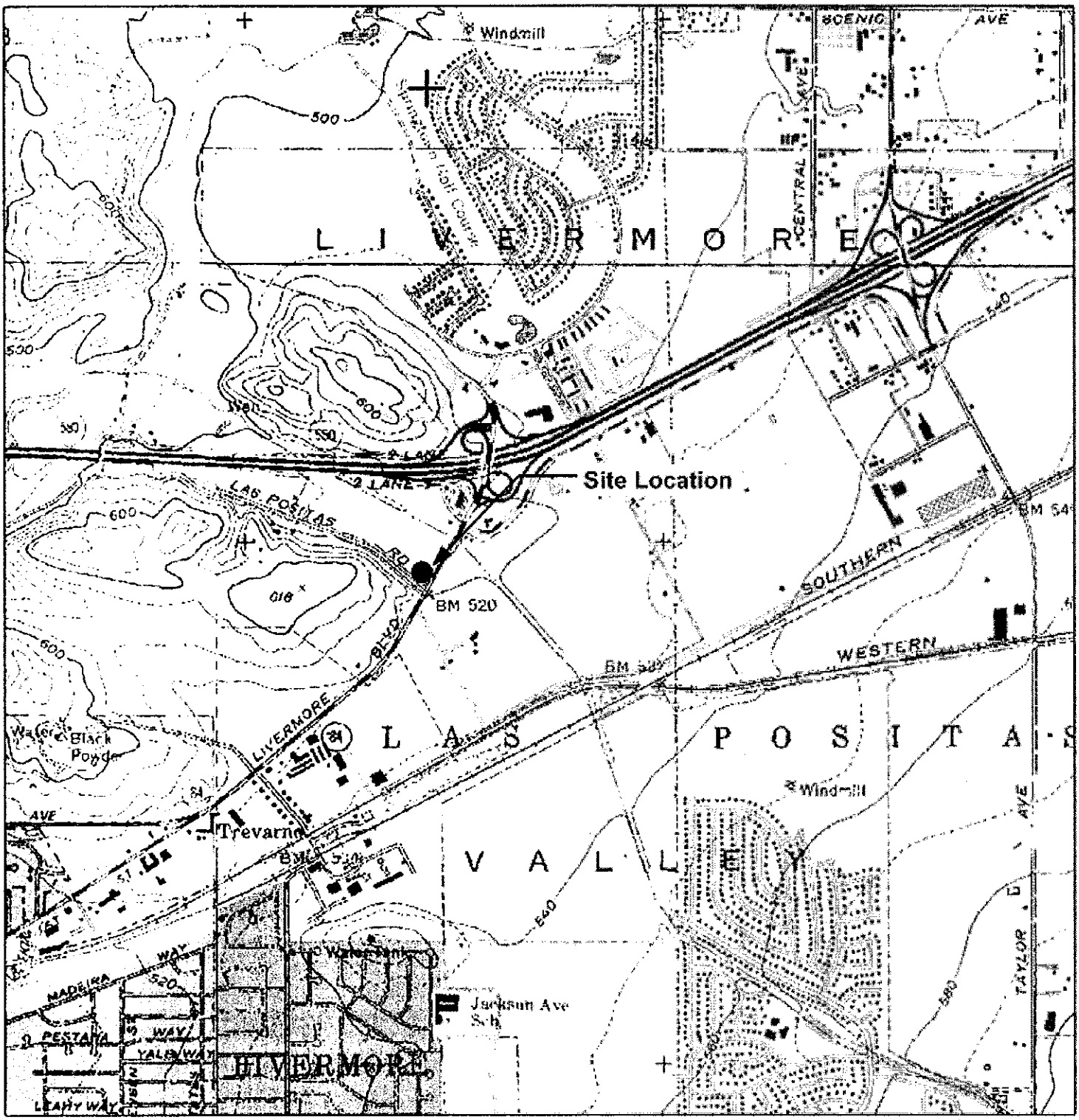
VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: 12/01/06	Date of Well Decommissioning Report: 01/29/07	
All Monitoring Wells Decommissioned: (Yes) No	Number Decommissioned: 4	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: NA		
ACEH Concurrence - Signature: Jerry Wickham		Date: 01/31/07

Attachments:

1. Site Location Map and Site Map
2. Groundwater Elevation Contour Map - July 31, 2006
3. TPH-G, Benzene, and MTBE Groundwater Concentrations Map
4. Summary of Soil Analytical Data
5. Summary of Groundwater Analytical Data
6. Boring Logs

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



GENERAL NOTES:
Base Map from: DeLorme Yarmouth, ME 04096
Source Data: USGS

North

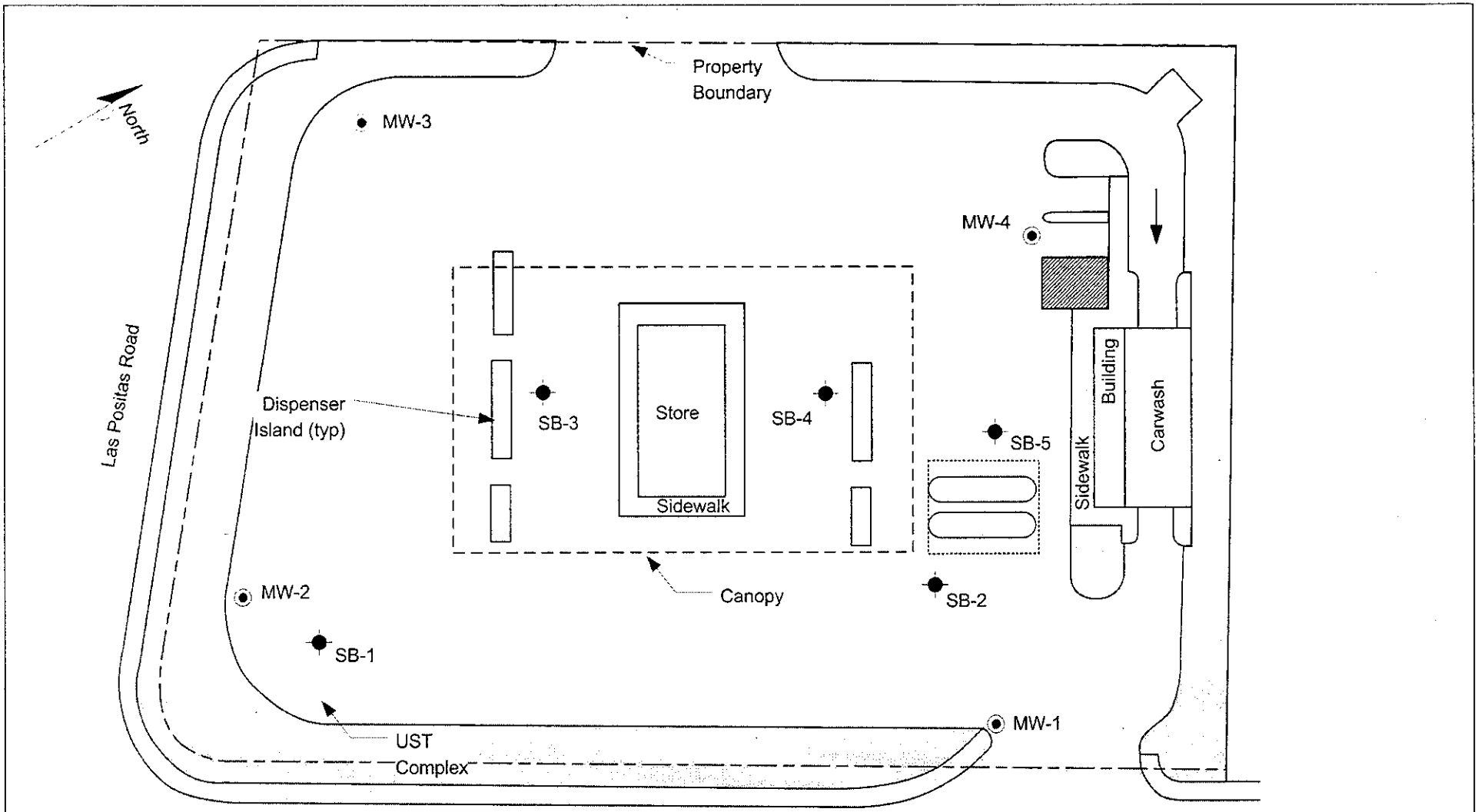
0 1,800 3,600
Scale, Feet

FIGURE 1
SITE LOCATION MAP

SHELL-BRANDED SERVICE STATION
4530 Las Positas Roas
Livermore, California

PROJECT NO. SJ45-30L-1.2004	DRAWN BY VF 9/26/03
FILE NO. SJ45-30L-1.2004	PREP
REVISION NO.	REVII

ATTACHMENT 1



LEGEND

MW-2 **GROUNDWATER MONITORING WELL**

SB-1 **SOIL BORING LOCATIONS**

0 40 FT

APPROX. SCALE

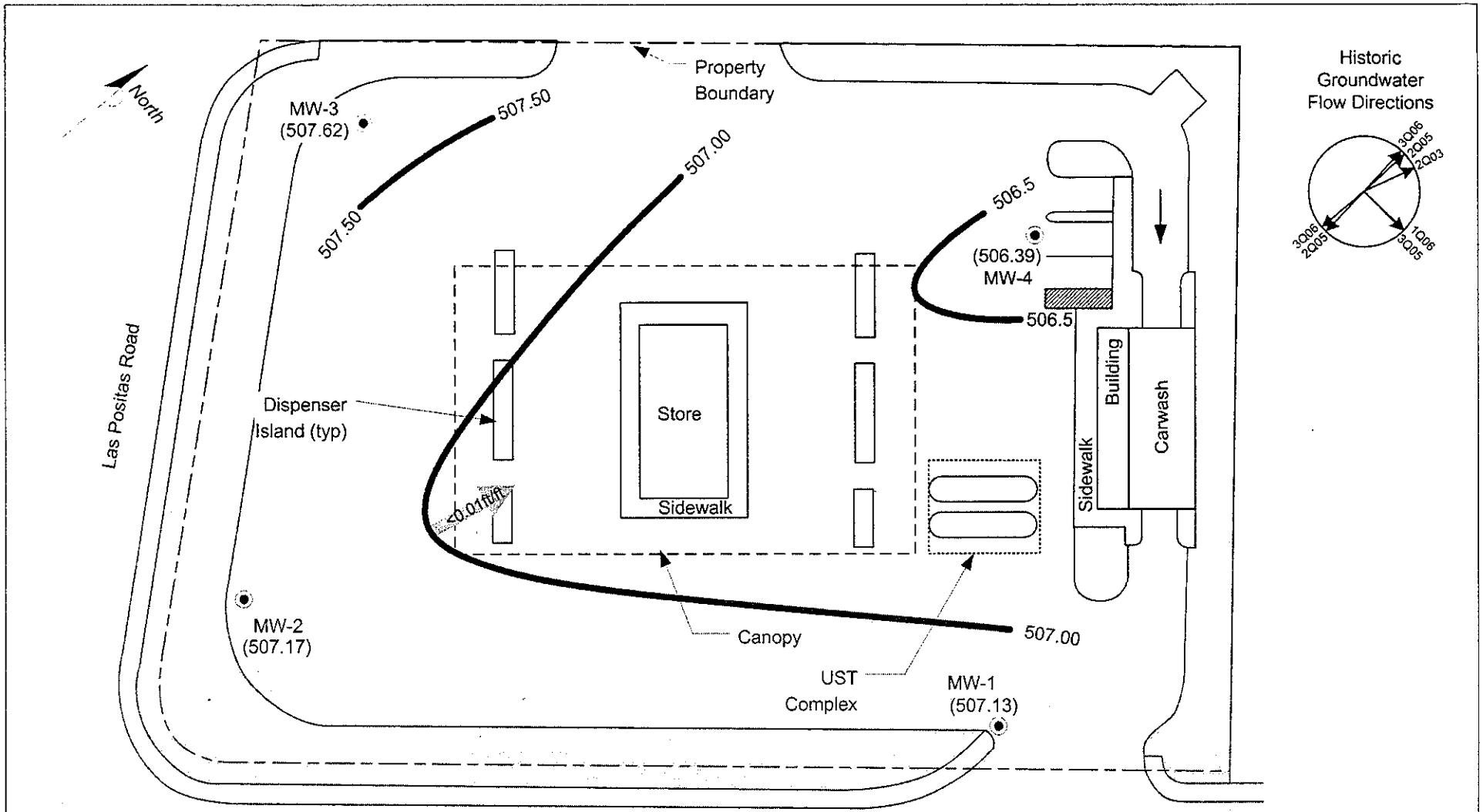
FIGURE 2

SITE MAP

SHELL-BRANDED SERVICE STATION
4530 Las Positas Road
Livermore, California

PROJECT NO. SJ45-30L-1.2006	DRAWN BY JL 02/27/06
FILE NO. SJ45-30-1.2006	PREPARED BY AP
REVISION NO. 1	REVIEWED BY

Delta
Environmental
Consultants, Inc.



North First

LEGEND

MW-2 ◉ **GROUNDWATER MONITORING WELL**

(506.96) **GROUNDWATER ELEVATION (FEET-MSL), 07/31/06**

507.00 **GROUNDWATER ELEVATION CONTOUR**

<0.01 ft/ft **APPROXIMATE GROUNDWATER FLOW DIRECTION**

0 40 FT

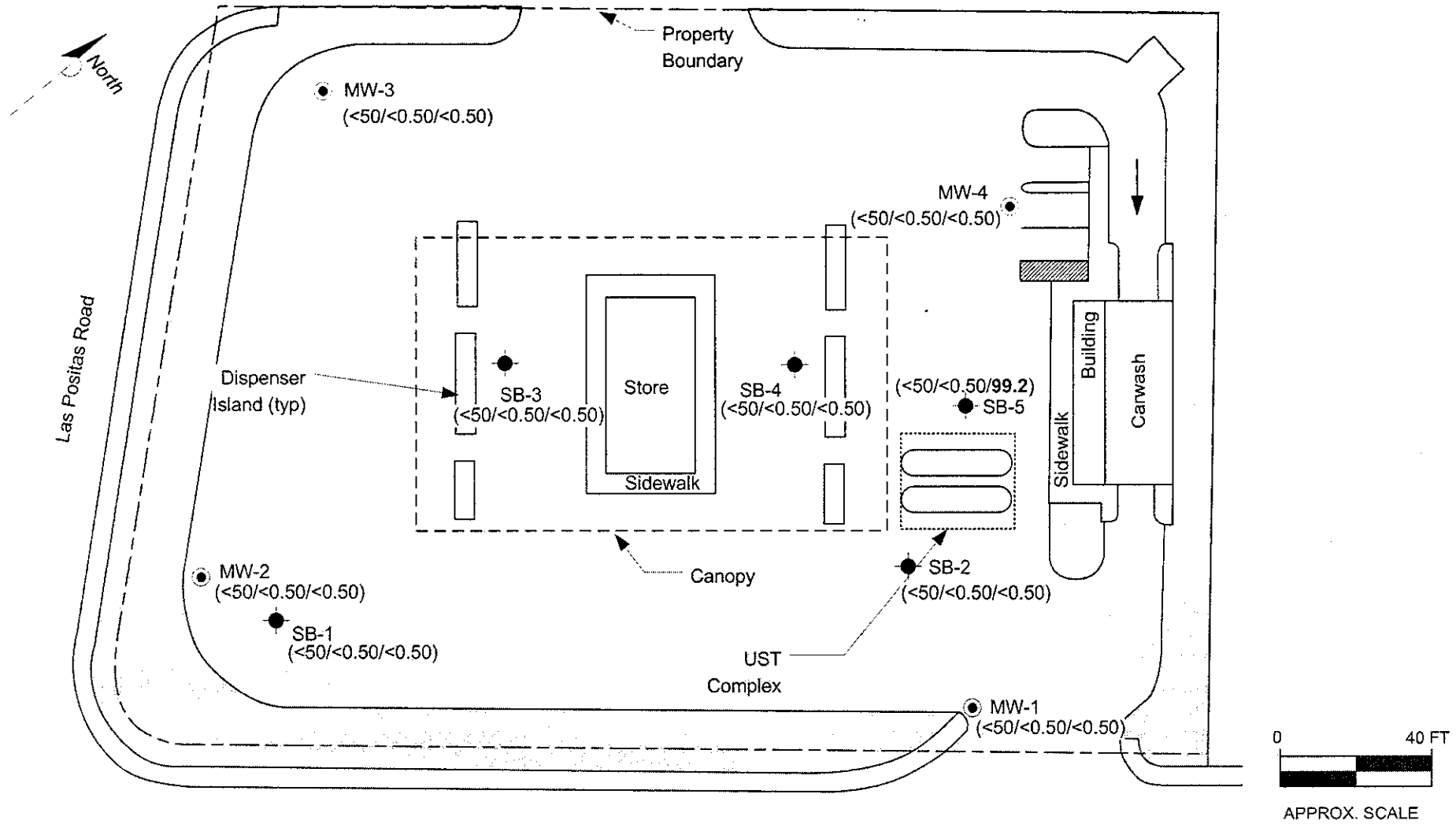
APPROX. SCALE

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP
JULY 31, 2006

SHELL-BRANDED SERVICE STATION
4530 Las Positas Road
Livermore, California

PROJECT NO. SJ45-30L-1.2006	DRAWN BY BH 08/29/06	
FILE NO. SJ45-30-1.2006		
REVISION NO. 1		

ATTACHMENT 2



LEGEND

MW-2 — **GROUNDWATER MONITORING WELL (SAMPLED 7/31/06)**

SB-2 — **SOIL BORING LOCATIONS (SAMPLED 6/15/06 AND 6/16/06)**

(<50/<0.50/<0.50) — **TPH-G, BENZENE, AND MTBE CONCENTRATIONS (UG/L), 06/15/06**

FIGURE 4
TPH-G, BENZENE AND MTBE GROUNDWATER CONCENTRATIONS MAP

SHELL-BRANDED SERVICE STATION
4530 Las Positas Road
Livermore, California

PROJECT NO. SJ45-30L-1.2006	DRAWN BY BH 08/29/06
FILE NO. SJ45-30-1.2006	F
REVISION NO. 1	F

ATTACHMENT 3

Table 1
Summary of Soil Analytical Data
Shell Service Station
4530 Las Positas, Livermore, California

Sample Designation	Date Sampled	Depth (feet)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylene (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	1,2 -DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)
SB 1 @ 5'	6/15/2006	5	ND<0.1	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 1 @ 10'	6/15/2006	10	ND<0.1	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 1 @ 15'	6/15/2006	15	**0.110**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 2 @ 5'	6/16/2006	5	**0.126**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 2 @ 10'	6/16/2006	10	ND<5.0	ND<0.1	ND<0.1	ND<0.1	ND<0.25	ND<0.1	ND<0.1	ND<0.25	ND<0.1	ND<2.5	ND<0.1	ND<0.1	ND<10
SB 2 @ 15'	6/16/2006	15	**0.201**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	**0.002**	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 2 @ 20'	6/16/2006	20	ND<0.1	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 3 @ 5'	6/15/2006	5	ND<0.1	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 3 @ 9.5'	6/15/2006	9.5	ND<0.1	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 3 @ 14'	6/15/2006	14	ND<0.1	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 4 @ 5'	6/15/2006	5	**0.208**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 4 @ 10'	6/15/2006	10	**0.285**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 4 @ 15'	6/15/2006	15	**0.145**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 5 @ 5'	6/16/2006	5	**1.85**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	**0.373**	ND<0.002	ND<0.005	ND<0.002	**0.184**	ND<0.002	ND<0.002	ND<0.2
SB 5 @ 10'	6/16/2006	10	**1.52**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	**0.521**	ND<0.002	ND<0.005	ND<0.002	**0.0668**	ND<0.002	ND<0.002	ND<0.2
SB 5 @ 14.5'	6/16/2006	14.5	**0.210**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	**0.0195**	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2
SB 5 @ 18.5'	6/16/2006	18.5	**0.144**	ND<0.002	ND<0.002	ND<0.002	ND<0.005	**0.008**	ND<0.002	ND<0.005	ND<0.002	ND<0.05	ND<0.002	ND<0.002	ND<0.2

Notes:
mg/kg = milligrams per kilogram
TPH-G = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert amy-methyl ether
TBA = tert-Butyl alchohol
1,2 - DCA = 1, 2 dichloroethane
EDB = 1, 2 Dibromoethane

ATTACHMENT 4

Table 2
Summary of Grab Groundwater Analytical Data
Shell Service Station
4530 Las Positas, Livermore, California

Sample Designation	Date Sampled	TPH-G (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Xylene (ug/l)	MTBE (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	TBA (ug/l)	1,2 -DCA (ug/l)	EDB (ug/l)	Ethanol (ug/l)
SB-1	6/15/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<50
SB-2	6/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<50
SB-3	6/15/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<50
SB-4	6/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<50
SB-5	6/16/2006	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**99.2**	ND<0.5	ND<0.5	ND<0.5	ND<10	ND<0.5	ND<0.5	ND<50

Notes:
mg/kg = milligrams per kilogram
TPH-G = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert amy-methyl ether
TBA = tert-Butyl alchohol
1,2 - DCA = 1, 2 dichloroethane
EDB = 1, 2 Dibromoethane

ATTACHMENT 5

WELL CONCENTRATIONS
Shell-branded Service Station
4530 Las Positas Road
Livermore, CA

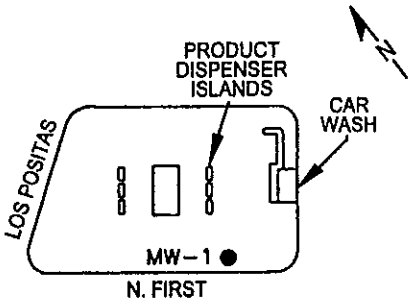
Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-1	09/20/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-1	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	519.86	13.13	506.73
MW-1	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	519.86	13.17	506.69
MW-1	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	519.86	12.80	507.06
MW-1	04/15/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.86	12.64	507.22
MW-1	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.86	13.25	506.61
MW-1	10/21/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.86	13.43	506.43
MW-1	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.86	13.15	506.71
MW-1	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	519.86	13.04	506.82
MW-1	07/14/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	519.86	13.28	506.58
MW-1	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	519.86	12.99	506.87
MW-1	07/21/2005	<50 a	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.86	12.75	507.11
MW-1	01/31/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	519.86	12.79	507.07
MW-1	**07/31/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**519.86**	**12.73**	**507.13**
MW-2	09/20/2001	NA	<0.50	<0.50	<0.50	<0.50	0.6	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-2	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	518.50	12.41	506.09
MW-2	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	518.50	12.34	506.16
MW-2	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	518.50	11.56	506.94
MW-2	04/15/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.50	11.38	507.12
MW-2	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.50	13.45	505.05
MW-2	10/21/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.50	12.64	505.86
MW-2	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.50	11.97	506.53
MW-2	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	518.50	11.91	506.59
MW-2	07/14/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	518.50	12.44	506.06
MW-2	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	518.50	11.81	506.69

WELL CONCENTRATIONS
Shell-branded Service Station
4530 Las Positas Road
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-2	07/21/2005	<50 a	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.50	11.53	506.97
MW-2	01/31/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	518.50	11.54	506.96
MW-2	**07/31/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**518.50**	**11.33**	**507.17**
MW-3	09/20/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-3	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	518.93	11.58	507.35
MW-3	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	518.93	11.17	507.76
MW-3	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	518.93	11.18	507.75
MW-3	04/15/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.93	11.25	507.68
MW-3	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.93	11.39	507.54
MW-3	10/21/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.93	11.54	507.39
MW-3	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.93	11.27	507.66
MW-3	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	518.93	11.34	507.59
MW-3	07/14/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	518.93	11.43	507.50
MW-3	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	518.93	11.48	507.45
MW-3	07/21/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	518.93	11.18	507.75
MW-3	01/31/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	518.93	11.38	507.55
MW-3	**07/31/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**518.93**	**11.31**	**507.62**
MW-4	11/06/2001	NA	<0.50	<0.50	<0.50	<0.50	16.0	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-4	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	470	<2.0	<2.0	<2.0	<50	519.44	13.42	506.02
MW-4	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	22	<2.0	<2.0	<2.0	<50	519.44	13.42	506.02
MW-4	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	519.44	13.07	506.37
MW-4	04/15/2003	<50	<0.50	<0.50	<0.50	<1.0	2.0	<2.0	<2.0	<2.0	<5.0	519.44	12.93	506.51
MW-4	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.44	13.51	505.93
MW-4	10/21/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.44	13.69	505.75

WELL CONCENTRATIONS
Shell-branded Service Station
4530 Las Positas Road
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-4	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.44	13.48	505.96
MW-4	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	519.44	13.36	506.08
MW-4	07/14/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	519.44	13.47	505.97
MW-4	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	519.44	13.18	506.26
MW-4	07/21/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	519.44	13.10	506.34
MW-4	01/31/2006	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<10.0	519.44	13.12	506.32
MW-4	**07/31/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**519.44**	**13.05**	**506.39**



LOCATION MAP

IT CORPORATION

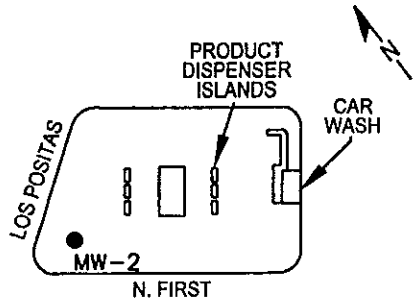
BORING NO. MW-1
PAGE 1 OF 1

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: SCH 40 PVC
SLOT SIZE: 0.02"
GRAVEL PACK: NO.3

CLIENT: EQUIVA
DATE DRILLED: 9-19-01
LOCATION: 4530 LOS POSITAS RD.
HOLE DIAMETER: 8"
HOLE DEPTH: 22.5'
WELL DIAMETER: 2"
WELL DEPTH: 22.5'
CASING STICKUP: NA

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
Neat Cement Grout										Asphalt Base Rock
	No	Dmp	0.0		2				CL	SILTY SANDY CLAY: medium brown; low plasticity; 10-15% fine sand; 20% medium sand; 10% coarse sand; trace to 10% fine gravel
	No	Dmp	0.0						CL	CLAY: dark gray; low plasticity; 15-20% medium sand; trace to 10% coarse sand
	No	Dmp							SP	SAND: light yellow-brown; trace fines; 85-90% fine to medium sand; 10-15% coarse sand (possibly fill sand)
	No	Dmp	0.0		4				CL	As above; dark gray; sand content decreases slightly; soft
Bentonite										
	No	Dmp	0.0	3						
	No	Dmp		3						
	No	Dmp		3	6					
	No	Dmp	0.0	3					CL	SANDY CLAY: olive-brown with gray mottling; low plasticity; 20-25% fine sand; trace coarse sand; soft to firm
	No	Dmp		3						
	No	Dmp		5						
	No	Dmp	0.0	14	8					
	No	Dmp		16					SC	CLAYEY SAND: light brown; 45% fines; 30% medium to fine sand; 15-20% coarse sand; trace to 10% fine gravel; medium dense
				17						
				19						
	No	Mst	0.0	3	10					
	No	Mst		4					CL	SANDY CLAY: olive-gray-brown; low plasticity; 35% fine to medium sand; trace to 10% coarse sand; trace fine gravel; firm
	No	Mst	0.0	6						
	No	Mst		8						
No. 3 Sand	No	Wet	0.0	12	12					
	No	Wet		14					SW	SAND: yellow-brown; 5-10% fines; 35% medium sand; 30% coarse sand; 20% fine sand; 15% fine gravel; trace coarse gravel; loose to medium dense
	No	Sat	0.0	6	▽					
	No	Sat		12						
	No	Sat	0.0	12	14					
				14					SC	CLAYEY SAND: dark brown-gray; 20% fines; 30% medium sand; 20-25% coarse sand; trace to 10% fine gravel; trace coarse gravel; 15-20% fine sand; loose to medium dense
				9						
	No	Sat	0.0	12	16					
	No	Dmp	0.0	22						
	No	Wet		6					CL	SANDY CLAY: olive-gray-brown; low plasticity; 10-20% fine sand; trace coarse sand to fine gravel; firm to stiff
	No	Mst	0.0	6						
				8						
	No	Mst	0.0	5	18					
	No	Mst		6						
	No	Mst	0.0	9						
				11						
	No	Mst	0.0	5	20					
	No	Mst		5						
				7						
	No	Mst	0.0	6						
	No	Mst		12	22					

ATTACHMENT 6



LOCATION MAP

IT CORPORATION

BORING NO. MW-2
PAGE 1 OF 1

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: SCH 40 PVC
SLOT SIZE: 0.02"
GRAVEL PACK: NO.3

CLIENT: EQUIVA
DATE DRILLED: 9-19-01
LOCATION: 4530 LOS POSITAS RD.
HOLE DIAMETER: 8"
HOLE DEPTH: 22.5'
WELL DIAMETER: 2"
WELL DEPTH: 22.5'
CASING STICKUP: NA

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
										Asphalt
										Base Rock
		Dmp							CL	SILTY SANDY CLAY: medium brown; low plasticity; 10-15% fine sand; 20% medium sand; 10% coarse sand; trace to 10% fine gravel
Neat Cement Grout	No	Dmp	0.0		2				CL	CLAY: dark gray; low plasticity; 15-20% medium sand; trace to 10% coarse sand
					4					
	No	Dmp	0.0	4					CL	SANDY CLAY: olive-gray-brown; low plasticity; 5-10% medium sand; 15-20% fine sand; trace coarse sand; trace fine gravel; firm
	No	Dmp		9						
Bentonite	No	Dmp	0.0	16	6					
									SC	CLAYEY SAND: light brown; 45% fines; 30% medium to fine sand; 15-20% coarse sand; trace to 10% fine gravel; medium dense
					8					
	No	Dmp	0.0	6					CL	SILTY CLAY: light to medium brown with some gray mottling; low plasticity; 10-15% fine sand; trace to10% medium sand; trace coarse sand; firm
	No	Dmp		6						
	No	Dmp	0.0	8	10					
No. 3 Sand					12					
	No	Dmp	0.0	5					CL	As above; a little grayer
	No	Dmp		6	14					
	No	Dmp	0.0	8	▽					
					16					
									SC	CLAYEY SAND: gray to light brown; 25-30% fines; 10-15% fine gravel; 40% medium to fine sand; 20% coarse sand; trace coarse gravel; medium dense
					18					
	No	Sat	0.0	16						
	No	Sat		22						
	No	Sat	0.0	28	20					
									CL	SANDY CLAY: olive gray-brown; low plasticity; 10-20% fine sand; trace coarse sand to fine gravel
					22					

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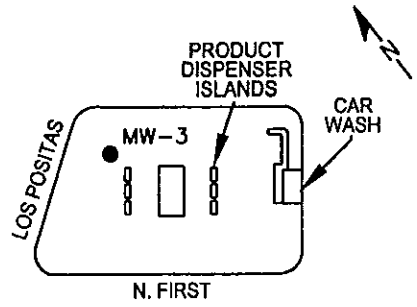

LOCATION MAP

IT CORPORATION

BORING NO. MW-3
PAGE 1 OF 1

PROJECT NO: 830053	CLIENT: EQUIVA
LOGGED BY: RMB	DATE DRILLED: 9-20-01
DRILLER: WDC	LOCATION: 4530 LOS POSITAS RD.
DRILLING METHOD: HSA	HOLE DIAMETER: 8"
SAMPLING METHOD: CAL MOD	HOLE DEPTH: 22.5'
CASING TYPE: SCH 40 PVC	WELL DIAMETER: 2"
SLOT SIZE: 0.02"	WELL DEPTH: 22.5'
GRAVEL PACK: NO.3	CASING STICKUP: NA

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
									Asphalt
									Back Fill
								CL	SILTY SANDY CLAY: medium brown; low plasticity; 30-35% sand; trace to 10% fine gravel
					2			CL	CLAY: dark gray; low plasticity; 15-20% medium sand; trace to 10% coarse sand
Neat Cement Grout	No	Dmp	0.0						
					4			CL	SANDY CLAY: olive-gray-brown; low plasticity; 5-10% medium sand; 15-20% fine sand; trace coarse sand to fine gravel
	No	Dmp	0.0	10					
Bentonite	No	Dmp	0.0	10				SC	CLAYEY SAND: light gray-brown; 25-30% fines; 35% fine to medium sand; 20-25% coarse sand; 10-15% fine gravel; trace coarse gravel; loose
				13	6				
					8				
	No	Dmp	0.0	17					
	No	Dmp		18				SC	CLAYEY SAND: medium to dark gray-brown; 20% fines; 30-35% coarse sand; 25% medium to fine sand; 15-20% fine gravel; trace to 10% coarse gravel; medium dense
	No	Dmp	0.0	20	10				
					12				
No. 3 Sand	No	Mst	0.0	4				CL	CLAY: light olive-gray-brown; low plasticity; 5-15% fine sand; trace coarse sand to fine gravel; firm to stiff
	No	Mst		6	14				
	No	Mst	0.0	7	▽				
					16				
					18				
	No	Mst	0.0	4				CL	As above
	No	Mst		6					
	No	Mst	0.0	10	20				
					22				

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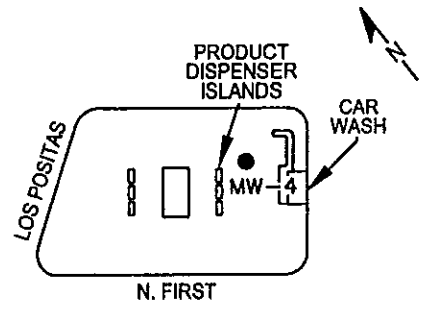

LOCATION MAP

IT CORPORATION

BORING NO. MW-4
PAGE 1 OF 1

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: SCH 40 PVC
SLOT SIZE: 0.02"
GRAVEL PACK: NO.3

CLIENT: EQUIVA
DATE DRILLED: 9-20-01
LOCATION: 4530 LOS POSITAS RD.
HOLE DIAMETER: 8"
HOLE DEPTH: 22.5'
WELL DIAMETER: 2"
WELL DEPTH: 22.5'
CASING STICKUP: NA

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
Neat Cement Grout										Asphalt
										Back Fill (Water seeping out of fill)
					2				CL	SILTY SANDY CLAY: medium brown; low plasticity; 10-15% fine sand; 20% medium sand; 10% coarse sand; trace to 10% fine gravel
									CL	CLAY: dark gray; low plasticity; 15-20% medium sand; trace to 10% coarse sand; soft to firm
					4					
	No	Dmp/Mst	0.0	2						
Bentonite	No	Dmp/Mst	0.0	4	6					
	No	Dmp/Mst	0.0	5					CL	SILTY SANDY CLAY: olive-gray-brown; low plasticity; 15-20% fine sand; trace to 10% medium sand; trace coarse sand to fine gravel
	No	Mst	0.0		8					
	No	Mst	0.0							
	No	Mst	0.0		10					
No. 3 Sand										
					12				SC	CLAYEY SAND: medium to dark gray-brown; low plasticity; 20% fines; 30-35% coarse sand; 25% medium to fine sand; 15-20% fine gravel; trace to 10% coarse gravel
	No	Wet	0.0							
	No	Wet	0.0		14					
	No	Wet	0.0		▽				SP	SAND: medium yellow-brown; 5-10% fines; 65% medium sand; 30-35% fine sand; trace to 10% coarse sand; trace fine gravel
					16					
					18					
	No	Wet	0.0						SP	As above
	No	Wet	0.0							
	No	Wet	0.0		20					
					22					

/ N:\Logs\830053\4530LosPositas\MW-4.dwg Thu, 24/Jan/02 04:51pm lwahlgren

Delta

Environmental Consultants, Inc.

Project No: SJ45-30L-1	Client: Shell Oil Products US	Well No: SB-1
Logged By: Andy Persio	Location: 4530 Las Positas	Page 1 of 1
Driller: Gregg	Date Drilled: 6/15/2006	
Drilling Method: Geoprobe	Hole Diameter: 3"	
Sampling Method: Geoprobe	Hole Depth: 16'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Location Map

Please see site map

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout				hand augered	1			AF	~3" asphalt and 9" base rock
					2			CL	**Lean CLAY with Sand**: lighy brown, 15-25% fine grained sands, medium plasticity
					3			CH	**Fat CLAY with Sand**: dark brown, 15-25% fine grained sands, high plasticity
					4			CL	
		moist	0.8		5				**Lean CLAY with Sand**: light brown, 15-25% fine grained sands, medium plasticity
					6			SC	**Clayey SAND**: brown, 30-40% fines, fine grained sands
		moist	1.9		7				
					8				(fine to coarse grained sands)
		moist	0.6		9				
					10				
					11				(20-30% fines, 10-20% gravels up to 0.5" in diameter)
	▼	1:20p			12				
	▽	1:00p			13			CL	**Lean CLAY with Sand**: light brown, 15-25% fine grained sands, medium plasticity
		moist	3.3		14				
					15				
					16				bottom of boring at 16' bg
					17				
					18				
					19				
					20				

Delta

Environmental Consultants, Inc.

Project No: SJ45-30L-1	Client: Shell Oil Products US	Well No: SB-2
Logged By: Andy Persio	Location: 4530 Las Positas	Page 1 of 1
Driller: Gregg	Date Drilled: 6/16/2006	Location Map: Please see site map
Drilling Method: Geoprobe	Hole Diameter: 3"	
Sampling Method: Geoprobe	Hole Depth: 20'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
								AF	~4" asphalt and ~5" baserock
				hand augered	1			CL	**Lean CLAY with Sand**: light brown, 15-25% fine grained sands, medium plasticity
					2				
					3			CH	**Fat CLAY with Sand**: dark brown, 15-25% fine grained sands, high plasticity
					4				
					5			SC	**Clayey SAND**: greyish brown, 40-50% fines
Grout		moist	0.9		6				
					7			CL	**Lean CLAY with Sand**: light brown, 15-25% fine grained sands, low to medium plasticity, trace gravels up to 0.5" b-axis dia.
					8				
					9			CL	**Sandy Lean CLAY**: light brown, 30-40% fine to coarse grained sands, low plasticity, 5-15% gravels up to 0.5" axis
		moist	1.0		10				
					11				
					12				(20-30% fine grained sands, 5-15% gravels up to 0.5" dia.)
	9:35a ▼ 9:45a				13				
					14			SC	**Clayey SAND**: dark brown, 40-50% fines, fine to coarse grained sand, trace gravels
	9:20a ▽	moist	0.6		15			CL	**Sandy Lean CLAY**: light brown, 20-30% fine grained sands, medium plasticity
					16				
					17			GC	**Clayey GRAVEL with Sand**: brown, 5-15% fines, 10-20% sands
					18			CL	**Sandy Lean CLAY with Gravel**: light brown with orange mottling, 15-25% fine to coarse grained sands, 10-20% gravels up to 0.5" dia., low plasticity
		moist	1.4		19				
					20				Bottom of boring at 20' bg

Delta
Environmental Consultants, Inc.

Project No: SJ45-30L-1	Client: Shell Oil Products US	Well No: SB-3
Logged By: Andy Persio	Location: 4530 Las Positas	Page 1 of 1
Driller: Gregg	Date Drilled: 6/15/2006	Location Map: Please see site map
Drilling Method: Geoprobe	Hole Diameter: 3"	
Sampling Method: Geoprobe	Hole Depth: 16'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout				hand augered	1			AF	~7" concrete, another 7" of base rock (14" bg there was a fabric liner over 3" of pea gravel
					2			CL	**Sandy Lean CLAY**: brown, 25-35% fine grained sands, medium plasticity, contains up to 30% gravels from (3' to 4' bg) up to 2" dia.
					3				
					4				
		moist	0.4		5			CH	**Fat CLAY**: dark brown, 5-15% fine grained sands, high plasticity
					6			CL	**Lean CLAY**: light brown, 5-15% fine grained sands, medium plasticity, mottled w/caliche deposits
					7				
		moist	0.5		8				
					9				(no caliche)
					10				**Poorly Graded Gravel with Clay**: brown, 25-35% fine grained
					11			GP-GC	sands, 15-25% fines
					12			CL	**Sandy Lean CLAY**: brown, 20-30% fine grained sands, 5-15% gravels up to 1.5" dia., low plasticity
					13				
	▽	moist 10:15a	0.2		14			GP-GC	**Poorly Graded GRAVEL with Clay**: light brown, 25-35% fine grained sands, 10-20% fines
		9:40a			15				
					16				Bottom of boring at 16' bg
					17				
					18				
					19				
					20				

Delta

Environmental Consultants, Inc.

Project No: SJ45-30L-1	Client: Shell Oil Products US	Well No: SB-4
Logged By: Andy Persio	Location: 4530 Las Positas	Page 1 of 1
Driller: Gregg	Date Drilled: 6/15/2006	Location Map: Please see site map
Drilling Method: Geoprobe	Hole Diameter: 3"	
Sampling Method: Geoprobe	Hole Depth: 16'	
Casing Type: NA	Well Diameter: NA	
Slot Size: NA	Well Depth: NA	
Gravel Pack: NA	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout				hand augered				AF	concrete = 7" thick; baserock = 4" thick, fabric liner at 11" bg
					1			CL	**Sandy Lean CLAY**: brown, 25-35% fine grained sands, medium plasticity
					2				
					3				
					4				
		moist	0.7		5			CH	**Fat CLAY with Sand**: dark brown, 10-20% fine grained sands, high plasticity
					6			CL	**Lean CLAY**: light brown, 5-15% fine grained sands, medium plasticity
		moist	0.9		7				
		moist	3.3		8				
					9				
					10			CL	**Sandy Lean CLAY with Gravel**: brown, 20-30% sands, 10-20% gravels up to 1" dia., low plasticity
					11			CL	**Lean CLAY with Sand**: light brown, 5-15% fine grained sands, medium plasticity
					12				
					13			CL	**Lean CLAY**: light brown, 5-15% fine grained sands, medium plasticity
	11:00a ▼ 11:20a				14				
		moist wet	0.5		15			CL	**Sandy Lean CLAY with Gravel**: light brown, 30-40% fine to coarse grained sands, 10-20% gravels up to 1" b-axis diameter, low plasticity
					16				Bottom of boring at 16' bg
					17				
					18				
					19				
					20				

Delta
Environmental Consultants, Inc.

Project No: SJ45-30L-1	Client: Shell Oil Products US	Well No: SB-5	
Logged By: Andy Persio	Location: 4530 Las Positas	Page 1 of 1	
Driller: Gregg	Date Drilled: 6/16/2006	Location Map	
Drilling Method: Geoprobe	Hole Diameter: 3"	Please see site map	
Sampling Method: Geoprobe	Hole Depth: 18.5'		
Casing Type: NA	Well Diameter: NA		
Slot Size: NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout				hand augered	0			AF	~4" asphalt, ~5" baserock
					1			CL	**Sandy lean CLAY**: dark grey, 20-30% fine grained sands, 5-10% gravels up to 1" dia., medium plasticity
					2				
					3				
					4			CH	**Fat CLAY with Sand**: dark brown, 15-25% fine grained sands, medium plasticity
		moist	37.7		5				
					6			CL	**Sandy Lean CLAY**: dark grey, 20-30% fine grained sands, 5-10% gravels up to 1" dia.
					7				
					8				
					9				
		moist	31.3		10			SC	**Clayey SAND**: greyish brown, 40-50% fines, fine to coarse grained sands, 5-10% gravels up to 1" dia., low plasticity
					11				
					12				
	11:25a				13				
	11:05a								
	10:50a▽				14			GC	**Clayey GRAVEL with Sand**: brown, 10-20% fines, 15-25% fine to coarse grained sands, no plasticity, gravels up to 1.5" dia. (mostly less than 0.5" dia.)
		moist	1.4		15				
					16				
					17				(gravels up to 2" dia., larger gravels than above)
		moist	0.9		18			CL	**Sandy Lean CLAY**: light brown, 20-30% coarse to fine grained sands, 10-20% gravels up to 1" dia., low plasticity
					19				bottom of boring at 18.5' bg
					20				