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

June 27, 2007

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

Ms. Chris Davidson
City of Livermore Economic Development
1052 S. Livermore Ave.
Livermore, CA 94550

Subject: Fuel Leak Case No. RO0002525 and Geotracker Global ID T0600156427, Shell#13-5440, 318 South Livermore Avenue, Livermore, CA 94550

Dear Mr. Brown and Ms. Davidson:

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:

- Lead remains in soil at concentrations up to 110 ppm.
- Total petroleum hydrocarbons as gasoline remain in shallow groundwater at concentrations up to 514 ppb.
- MTBE remains in shallow groundwater at concentrations up to 3.5 ppb.

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. Tom Hargett (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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Shell Oil Products US
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Carson, CA 90810-1039

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1052 S. Livermore Ave.
Livermore, CA 94550

REMEDIAL ACTION COMPLETION CERTIFICATE

Dear Mr. Brown and Ms. Davidson:

Subject: Fuel Leak Case No. RO0002525 and Geotracker Global ID T0600156427, Shell#13-5440, 318 South Livermore Avenue, Livermore, CA 94550

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,

William a Pitcher for .
Ariu Levi
Director
Alameda County Environmental Health

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

I. AGENCY INFORMATION

Date: June 19, 2007

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#13-5440		
Site Facility Address: 318 South Livermore Avenue, Livermore, CA 94550		
RB Case No.: ---	Local Case No.: ---	LOP Case No.: RO0002525
URF Filing Date: 09/28/2004	Geotracker ID: T0600156427	APN: 97-108-9-3

Responsible Parties	Addresses	Phone Numbers
Denis Brown, Shell Oil Products US	20945 S. Wilmington Avenue, Carson, CA 90810	707-865-0251
Chris Davidson, City of Livermore Economic Development	1052 South Livermore Avenue, Livermore, CA 94550	935-960-4143

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1 through 3	12,000 gallons	Gasoline	Removed	12/2003
4	550 gallons	Waste Oil	Removed	12/2003
Piping			Removed	12/2003

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. No holes, cracks, or other signs of failure were observed in the tanks during removal.	
Site characterization complete? Yes	Date Approved By Oversight Agency: -----

Monitoring wells installed? Yes	Number: 5	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 38	Lowest Depth: 20	Flow Direction: West Northwest
Most Sensitive Current Use: Drinking water source.		

Summary of Production Wells in Vicinity: The nearest municipal supply well is California Water Service Well 12-01, which is approximately 1,200 feet northeast of the site. Based on the distance and crossgradient location from the site, California Water Service Well 12-01 is not expected to be a receptor for the site. California Water Service Well 15-01 is located approximately 1,400 feet southeast of the site. Based on the distance and upgradient location from the site, California Water Service Well 15-01 is not expected to be a receptor for the site. No water supply wells are located within 2,000 feet in the downgradient (northwest) direction.

Are drinking water wells affected? No	Aquifer Name: Mocho II Subbasin of Livermore-Amador Groundwater Basin
Is surface water affected? No	Nearest SW Name: Arroyo Mocho is approximately 3,500 feet south of the 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	3 - 12,000 gallon tanks 1 - 550 gallon tank	Transported to Ecology Control Industries in Richmond, CA for disposal	12/10/2003
Piping	Not reported	Transported to Ecology Control Industries in Richmond, CA for disposal	12/10/2003
Free Product	None	---	---
Soil	850 cubic yards	Transported to Forward Landfill in Manteca, CA for disposal	May 4, 2005 to February 23, 2006
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)	2,000	<1	770	514(1)
TPH (Diesel)	5,100(2)	<5	NA	NA
Oil and Grease	5,100(2)	<5	NA	NA
Benzene	<0.5	<0.5	68	16.6(1)
Toluene	110	<0.5	7.7	1.97(1)
Ethylbenzene	200	<0.5	7.8	2.37(1)
Xylenes	840	<0.5	34	6.08(1)
Metals	1,040(3)	110(4)	0.56(4)	0.56(4)
MTBE	<0.005(5)	<0.005(5)	12(6)	3.5(7)
Other (8240/8270)	21(8)	21(8)	NA	NA

(1) Groundwater samples collected during last groundwater monitoring event in April 2006.
(2) Waste oil stockpile soil sample.
(3) Lead – 1,040 ppm; Chromium = 46 ppm Nickel = 170 ppm; and Zinc = 64 ppm.
(4) Lead; no other metals analyzed.
(5)TBA = 0.016 ppm; EDB and EDC <0.076 ppm; DIPE, ETBE, TAME, and ethanol not analyzed in soil.
(6) EDC = 81 ppb; TBA <10 ppb; DIPE, ETBE, and TAME <2 ppb; and EDB <0.02 ppb in groundwater; ethanol not analyzed.
(7) Groundwater samples collected during last groundwater monitoring event in April 2006. EDC = 1.25 ppb; TBA <10 ppb; DIPE, ETBE, TAME, and EDB <0.5 ppb in groundwater; ethanol not analyzed.
(8) Napthalene = 21 ppm and 1,2,4-trimethylbenzene = 10 ppm; no other VOCs or SVOCs detected.

Site History and Description of Corrective Actions:

The site is a former Shell service station located on the eastern corner of South Livermore Avenue and Third Street in Livermore. The site is currently a vacant lot and is planned for residential development. Surrounding land use is mixed commercial and residential. In March 1989, a sample of backfill material collected near the fill pipe of the regular leaded gasoline UST contained total petroleum hydrocarbons as gasoline (TPHg) at a concentration of 37,000 ppm. Four groundwater monitoring wells (MW-1 through MW-4) were subsequently installed adjacent to the former USTs. TPHg was not detected in soil samples from the monitoring well borings but was detected in groundwater samples from two of the wells at a maximum concentration of 90 ppb. The wells were monitored until 1995 when the case was closed (ACEH case RO0000769).

In September 2001, Shell installed four groundwater monitoring wells (MW-5 through MW-8) as part of Shell's voluntary Groundwater Assessment Program (GRASP). MTBE was detected in groundwater samples from wells MW-7 and MW-8 at a maximum concentration of 6.9 ppb. All other analytes were below reporting limits.

In December 2003 and January 2004, USTs, dispensers, product piping, and an oil/water separator were removed. TPHg was detected in one of 17 soil samples collected during the UST system removal at a concentration of 4.9 ppm. Benzene and MTBE were not detected and TBA was detected in one soil sample at a concentration of 0.016 ppm. Lead was detected in the soil sample collected at a depth of 2.5 feet bgs beneath the eastern fuel dispenser island. Due to the detection of lead at a concentration exceeding the direct exposure screening level from the State of California Office of Human Hazard Evaluation of 150 mg/kg, over-excavation activities were conducted in the area of the eastern fuel dispenser island. Approximately 100 cubic yards of soil was removed during the initial excavation on May 4, 2005. Two of the confirmation soil samples collected following the May 4, 2005 excavation contained lead at concentrations exceeding 150 ppm. On May 18, 2005, an additional 75 cubic yards of soil was excavated. Elevated lead concentrations appeared to be associated with a dark brown soil layer that was observed between depths of approximately 2 to 4 feet bgs. The presence of concrete debris indicated that this portion of the site contained approximately 5 feet of fill material. Shell concluded that the lead was associated with the fill material.

On June 7, 2005, six exploratory excavations (potholes) were advanced to define the lateral extent of the fill and elevated concentrations of lead. Concrete was observed in two of the excavations and one of the soil samples contained lead at a concentration exceeding the 150 ppm cleanup goal. On August 8, 2005 an additional eight exploratory excavations were advanced. Concrete was observed in two of the excavations but lead was not detected at concentrations above 150 ppm. On August 9, 2005, approximately 280 cubic yards of soil was excavated along the northwest and northeast walls of the previous excavation to remove soil containing elevated concentrations of lead. Two of the 11 confirmation soil samples contained lead at concentrations exceeding 150 ppm. On October 24, 2005, approximately 145 cubic yards of soil was excavated along the northern corner and southwest sidewall of the previous excavation. Lead was detected at concentrations greater than the cleanup goal of 150 ppm in two of the 11 confirmation soil samples collected.

On February 23, 2006, the final excavation of 150 cubic yards was conducted. Lead was detected in only 3 of the 10 confirmation samples at a maximum concentration of 83 ppm, which is below the cleanup goal of 150 ppm. A cumulative total of 850 cubic yards of soil was removed from the site between May 4, 2005 and February 23, 2006.

Three soil borings (B-1 through B-3) were advanced at the site in June 2005 in order to assess groundwater conditions west of the former dispensers and determine if lead impacted soils were present beneath the former leaded gasoline UST. Petroleum hydrocarbons were not detected in any of the soil samples collected. Lead was detected at concentrations ranging from 3.8 to 17 ppm. TPHg and BTEX were detected in groundwater samples collected from a sand and gravel layer encountered at approximately 30 feet bgs. Monitoring well MW-9 was installed in September 2005 immediately west of the dispenser to assess water quality in the area of the dispensers and downgradient of the USTs. Quarterly groundwater monitoring was conducted in wells MW-5 through MW-8 from July 2002 until April 2006. Well MW-9 was sampled four times from September 23, 2005 until April 3, 2006. In order to accommodate redevelopment plans by the City of Livermore, all site monitoring wells were decommissioned on April 20, 2006.

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 and projected future 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: Yes	Number Decommissioned: 5	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

None.

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: 06/19/07
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: Donna L. Drogos	Date: 06/18/07

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: Mary Rose Cassa	Title: Sr. Eng. Geol.
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 6/18/07
Signature: Mary Rose Cassa	Date: 6/27/07

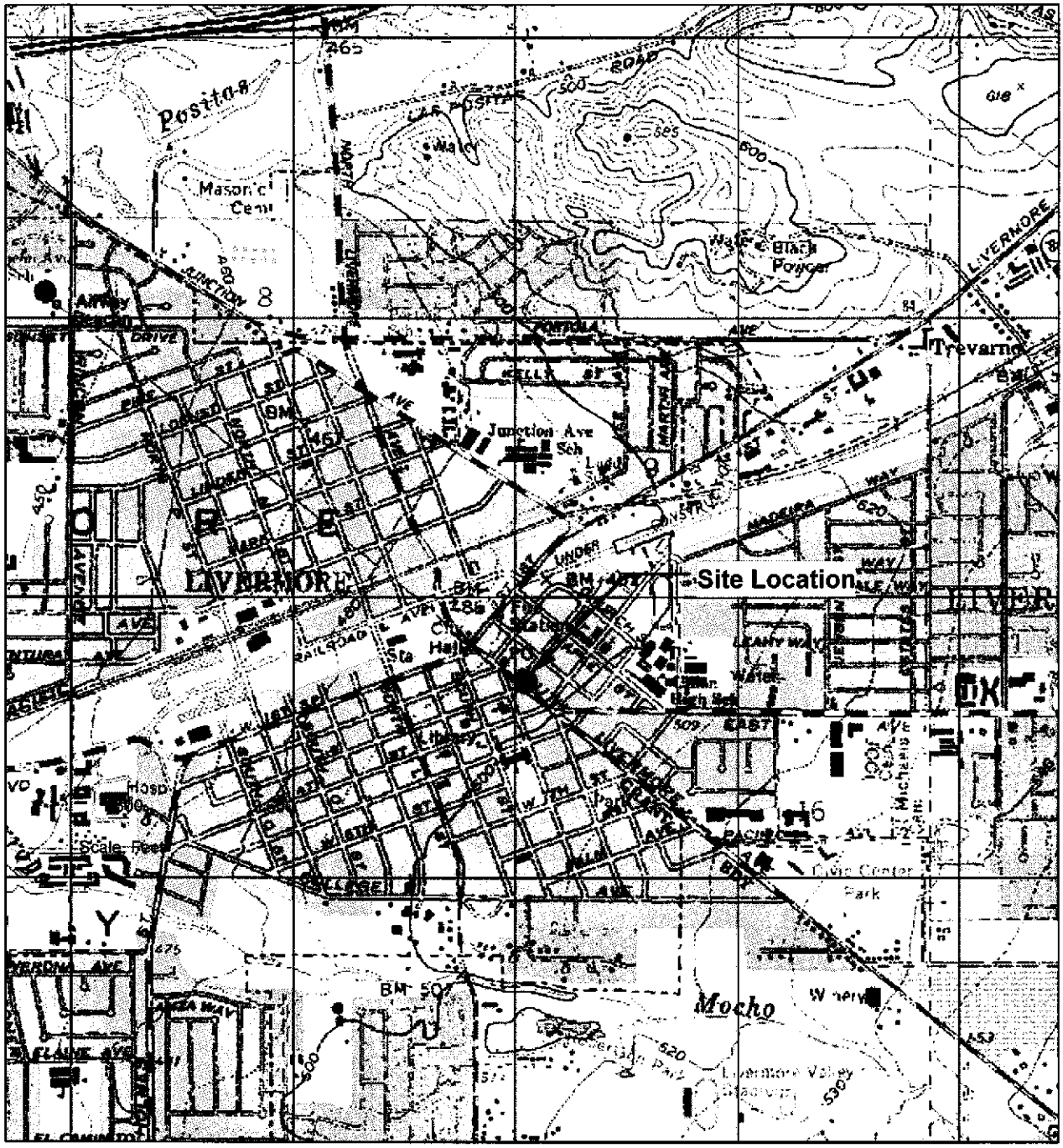
VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: NA	Date of Well Decommissioning Report: May 17, 2007	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 5	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: NA		
ACEH Concurrence - Signature: Jerry Wickham		Date: 06/19/07

Attachments:

1. Site Vicinity Map
2. Over-Excavation and Soil Sample Location Map and Lead Concentrations in Soil (mg/kg) at Depths from 1.9' to 3.5'
3. Groundwater Elevation Contour Map, April 3, 2006 and Groundwater Concentration Map, April 3, 2006
4. Soil Analytical Data
5. 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.



North

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

0 1,800 3,600
Scale, Feet

FIGURE 1

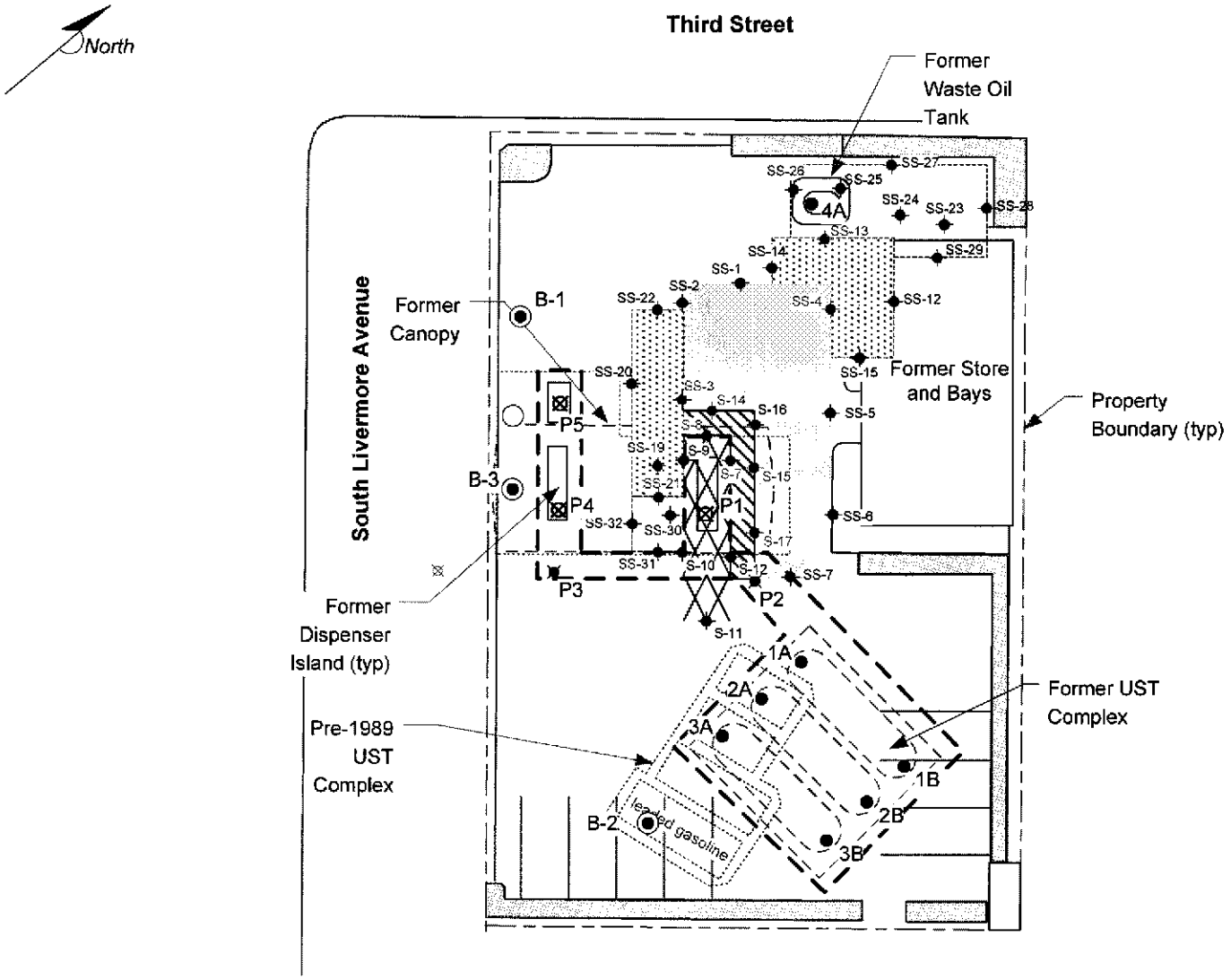
SITE LOCATION MAP

FORMER SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue
Livermore, CA

PROJECT NO. SJ31-8LI-1.2005	DRAWN BY VF 9/25/03
FILE NO. SJ31-8LI-1.2005	PREPARED BY VF
REVISION NO. 2	REVIEWED BY

Delta
Environmental
Consultants, Inc.

[redacted]



LEGEND

SS-25 ✦ **SOIL SAMPLE LOCATION AND DESIGNATION (2-23-06)**

✦ **OVER-EXCAVATED SIDEWALL SOIL SAMPLE LOCATION (LEAD CONCENTRATION > 150 PPM)**

✦ **SIDEWALL SOIL SAMPLE LOCATION (LEAD CONCENTRATION < 150 PPM)**

2A ● **TANK PIT SOIL SAMPLE LOCATION AND DESIGNATION (12/03 & 01/04)**

P3 ✱ **PIPING TRENCH SOIL SAMPLE LOCATION AND DESIGNATION (12/03 & 01/04)**

P4 ⊠ **DISPENSER SOIL SAMPLE LOCATION AND DESIGNATION (12/03 & 01/04)**

B-2 ◉ **SOIL BORINGS (05/05)**

EXCAVATION AREA (5-4-05)

EXCAVATION AREA (5-18-05)

EXCAVATION AREA (8-9-05)

EXCAVATION AREA (10-24-05)

AREA OF ADDITIONAL EXCAVATION (2-23-06)

0 30 FT

APPROX. SCALE

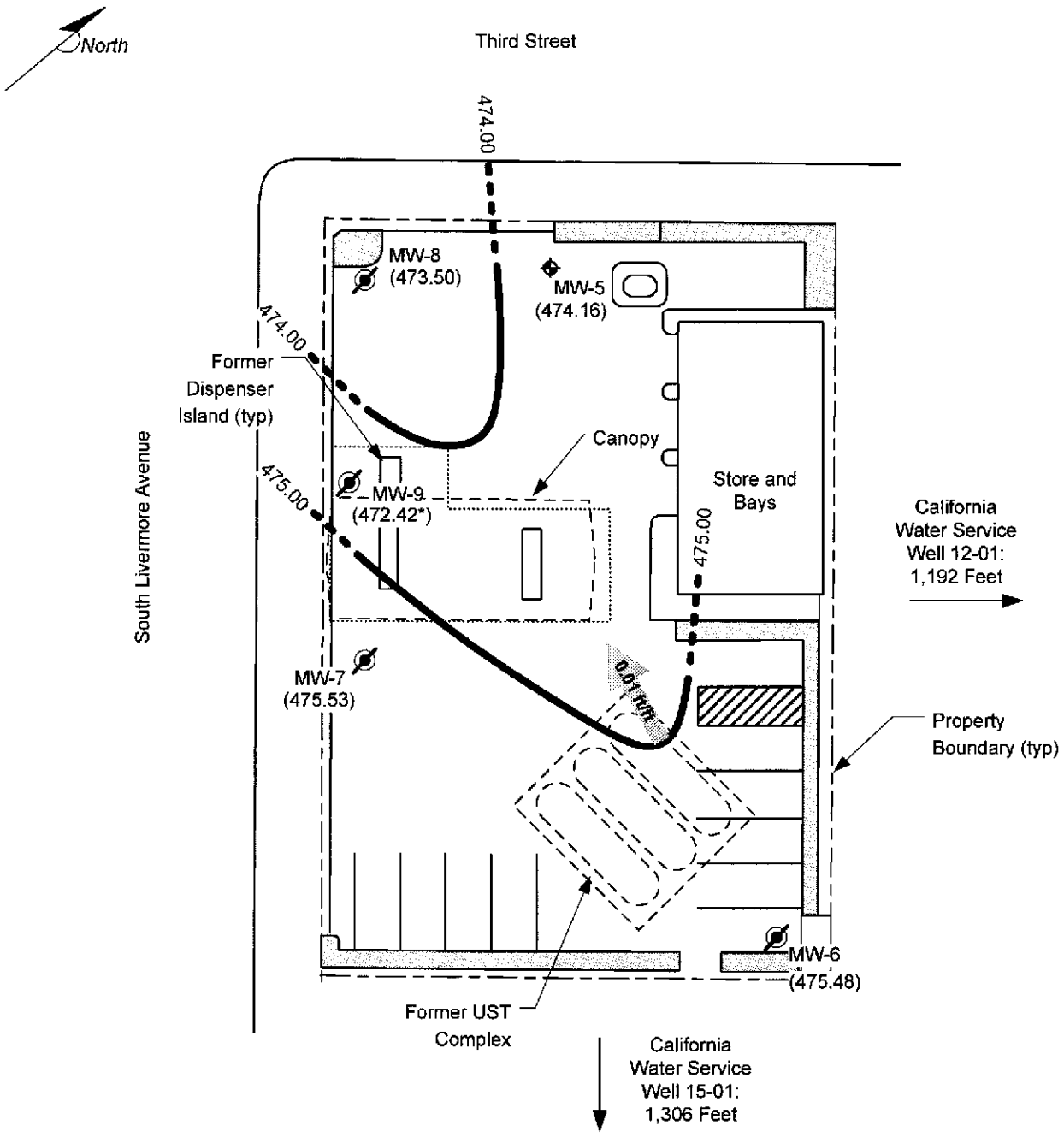
FIGURE 3

OVER-EXCAVATION AND SOIL SAMPLE LOCATION MAP

FORMER SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue
Livermore, California

PROJECT NO. SJ31-8LI-1.2006	DRAWN BY
FILE NO. SJ31-8LI-2006	
REVISION NO. 1	

ATTACHMENT 2



0 30 FT

APPROX. SCALE

LEGEND

MW-5 ⊕ **GROUNDWATER MONITORING WELL**

MW-6 ⌀ **DESTROYED GROUNDWATER MONITORING WELL**

(475.48) **GROUNDWATER ELEVATION (MSL), 04/03/06**

472.00 **GROUNDWATER ELEVATION CONTOUR**

0.02 ft/ft **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**

* **NOT USED IN CONTOURING**

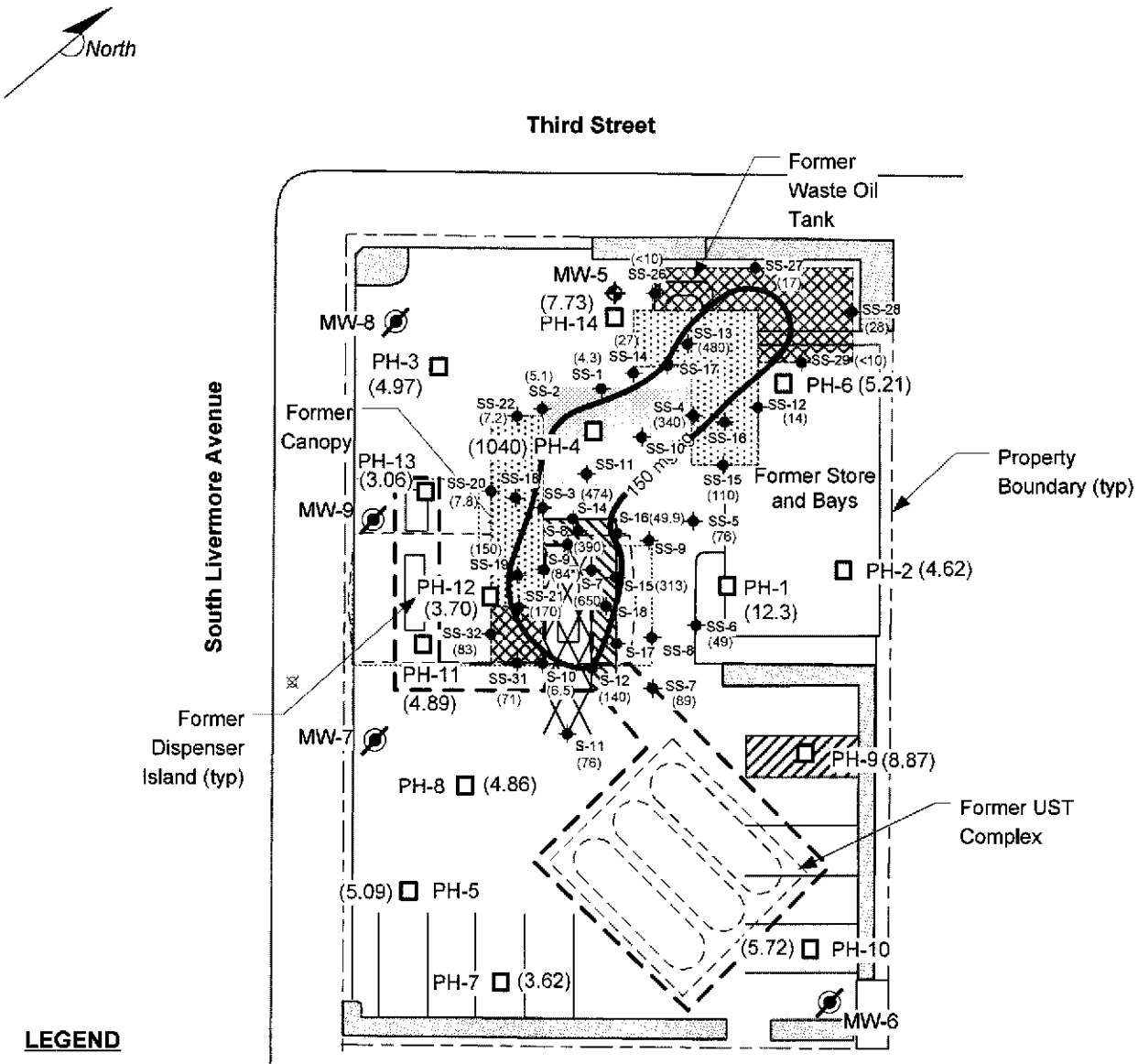
FIGURE 5

GROUNDWATER ELEVATION CONTOUR MAP,
APRIL 3, 2006

FORMER SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue
Livermore, California

PROJECT NO. SJ31-8LI-1.2006	DRAWN BY
FILE NO. SJ31-8LI-1.2006	
REVISION NO. 1	

ATTACHMENT 3



LEGEND

- SS-1 — **SOIL SAMPLE LOCATION AND DESIGNATION**
- (89) — **LEAD CONCENTRATIONS IN SOIL (MG/KG) AT DEPTHS FROM 1.9' TO 3.5' BG**
- 150 mg/kg — **LEAD CONCENTRATION CONTOUR**
- * — **THE LEAD CONCENTRATION AT S-9 IS BELOW THE ACHCSA CLEANUP GOAL**
- MW-5 — **EXISTING GROUNDWATER MONITORING WELL**
- MW-6 — **DESTROYED GROUNDWATER MONITORING WELL**
- PH-6 — **POTHOLE LOCATION AND DESIGNATION**
- (3.62) — **LEAD CONCENTRATION (PPM)**
- **EXCAVATION AREA (5-4-05)**
- **EXCAVATION AREA (5-18-05)**
- **EXCAVATION AREA (8-9-05)**
- **EXCAVATION (10-24-05)**
- **EXCAVATION AREA (2-23-06)**

0 30 FT

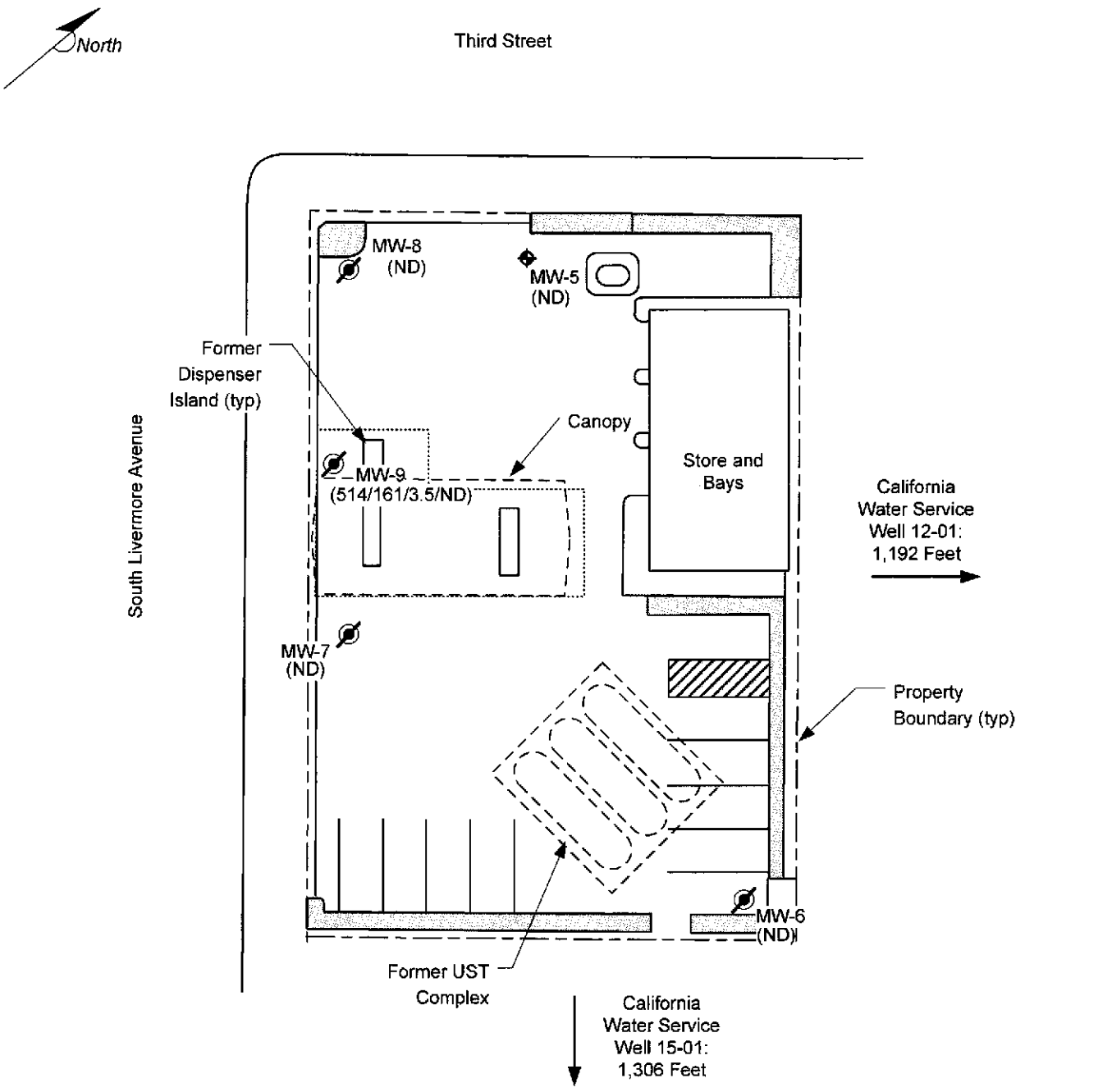
APPROX. SCALE

FIGURE 4
LEAD CONCENTRATIONS IN SOIL (MG/KG)
AT DEPTHS FROM 1.9' TO 3.5' BG

FORMER SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue
Livermore, California

PROJECT NO. SJ31-8LI-1.2006	DRAWN BY JL 03/09/06
FILE NO. SJ31-8LI-2006	PREPARED BY JL
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND

MW-5 ⊕ **GROUNDWATER MONITORING WELL**

MW-6 ⊘ **DESTROYED GROUNDWATER MONITORING WELL**

(514/161/3.5/ND) **TPPH/BENZENE/MTBE/TBA (µg/L)**

ND **GROUNDWATER CONCENTRATION BELOW LABORATORY DETECTION LIMIT**

FIGURE 6

GROUNDWATER CONCENTRATION MAP,
APRIL 3, 2006

FORMER SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue
Livermore, California

PROJECT NO. SJ31-8LI-1.2006	DRAWN BY AD 05/15/07
FILE NO. SJ31-8LI-1.2006	PREPARED BY HB
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

Table 1
Soil Analytical Data from Tank Pull
Shell-branded Service Station Incident #97464709
318 South Livermore Ave, Livermore CA

Sample Designation	Date Sampled	Time Sampled	Depth of Sample	MTBE (ug/Kg)	TPH-G (ug/Kg)	Benzene (ug/Kg)	Ethyl benzene (ug/Kg)	Toluene (ug/Kg)	Total xylenes (ug/Kg)	Total Lead (ug/Kg)	OTHER (8260B FULL LIST and metals)
P1	12/11/2003	14:18	30 inches	<5.0	<1000.0	<2.0	<5.0	<5.0	<5.0	380,000.0	
P2	12/11/2003	14:00	46 inches	<25.0	4900.0	<25.0	59.0 *110.0	150.0 *200.0	430.0 *840.0	<5000.0	56.0 n-B; 160.0 N; 54.0 n-P; 530.0 T; 160.0 T2
P3	12/11/2003	14:05	44 inches	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0 *7.0	<5000.0	21.0 N; 10.0 T
P4	12/11/2003	14:28	30 inches	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	<5000.0	
P5	12/11/2003	14:32	26 inches	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	<5000.0	
P3@100"	12/11/2003	15:01	100 inches	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	<5000.0	
1A	12/10/2003	16:10	16 feet	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	6,300.0	110.0 Ac;
1B	12/10/2003	16:15	16 feet	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	5,300.0	
2A	12/10/2003	16:43	16 feet	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	6,300.0	16.0 TBA;
2B	12/10/2003	16:18	16 feet	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	3,700.0	
3A	12/10/2003	16:45	16 feet	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	6,000.0	
3B	12/10/2003	16:20	16 feet	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	3,900.0	
4A	12/10/2003	16:25	10 feet	<5.0	<1000.0	<5.0	<5.0	7.0	7.8	3,900.0	46,000 Cr; 170,000 Ni; 64,000 Zn
Stockpile 1	12/10/2003	14:35	n/a	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	6,400.0	
Stockpile 2	12/10/2003	14:45	n/a	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	29,000.0	51.0 Ac;
Stockpile 3	12/10/2003	15:00	n/a	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	6,000.0	
Waste Oil Stockpile	12/10/2003	15:20	n/a	<5.0	<1000.0	<5.0	<5.0	<5.0	<5.0	17,000.0	54,000 OG; 5,100 TPH-D; 38,000 Cr; 95,000 Ni; 42,000 Zn

*** Indicates values taken from analysis done by 8260B full list (ug/Kg)**

n-B = n-Butylbenzene
N = Naphthalene
n-P = n-Propylbenzene
T =1,2,4-Trimethylbenzene
T2 = 1,3,5-Trimethylbenzene

OG = Oil and Grease
TPH-D = Diesel
TBA = tert-Butyl alcohol
Ac = Acetone
Cr = Chromium

Ni = Nickel
Zn = Zinc

ATTACHMENT 4

Table 1
Summary of Soil Boring Analytical Data
Former Shell Service Station
318 South Livermore Avenue, 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)	TBA (mg/kg)	EDB (ug/kg)	1,2-DCA (mg/kg)	Lead (mg/kg)
Boring Advancements												
B-1@5'	6/2/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**3.8**
B-1@10'	6/2/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.068	<0.005	**4.9**
B-1@15'	6/2/2005	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**6.9**
B-1@20'	6/2/2005	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.067	<0.005	**8.2**
B-1@25'	6/2/2005	25	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.068	<0.005	**7.1**
B-1@30'	6/2/2005	30	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.069	<0.005	**4.4**
B-1@35'	6/2/2005	35	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**7**
B-2@5'	6/2/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.068	<0.005	**3.9**
B-2@10'	6/2/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.069	<0.005	**4.4**
B-2@15'	6/2/2005	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.069	<0.005	**5.8**
B-2@20'	6/2/2005	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**6.8**
B-2@25'	6/2/2005	25	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.069	<0.005	**5.7**
B-2@30'	6/2/2005	30	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.067	<0.005	**4.7**
B-3@5'	6/2/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.069	<0.005	**4.4**
B-3@10'	6/3/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.067	<0.005	**17**
B-3@15'	6/3/2005	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.069	<0.005	**7.7**
B-3@20'	6/3/2005	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**7.4**
B-3@25'	6/3/2005	25	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**6.5**
B-3@30'	6/3/2005	30	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.068	<0.005	**4.3**
B-3@35'	6/3/2005	35	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**7**
B-3@40'	6/3/2005	40	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.068	<0.005	**7**
B-3@45'	6/3/2005	45	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.070	<0.005	**6.5**
MW-9 Well Installation												
MW-9@5'	9/15/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	**12**
MW-9@10'	9/15/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	**5**
MW-9@15'	9/15/2005	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	**9**
MW-9@20'	9/15/2005	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	**8.4**
MW-9@25.5'	9/15/2005	25.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	**6.5**
MW-9@30'	9/15/2005	30	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	**8.1**
MW-9@35'	9/15/2005	35	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.005	<0.005	**7.5**

Table 1
Summary of Soil Boring Analytical Data
Former Shell Service Station
318 South Livermore Avenue, 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)	TBA (mg/kg)	EDB (ug/kg)	1,2-DCA (mg/kg)	Lead (mg/kg)

Notes:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
TPH-G = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
TBA = Tert-butanol
EDB = Ethylene Dibromide
1,2-DCA = 1,2-Dichloroethane

Table 1
Summary of Soil Analytical Data
Pothole and Over-Excavation Samples
Former Shell Service Station
318 South Livermore Avenue, 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)	EDB (ug/kg)	1,2-DCA (mg/kg)	Lead (mg/kg)
Over-Excavation Confirmation Samples											
S-1 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	3.4
S-2 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	3.4
S-3 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	11
S-4 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	8
S-5@10'	5/4/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	4.4
S-6@10'	5/4/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	3.2
S-7@3.5'	5/4/2005	3.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	560
S-8@3.25'	5/4/2005	3.25	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	380
S-9@3.0'	5/4/2005	3	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	84
S-10@3.5'	5/4/2005	3.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	6.5
S-11@2.5'	5/4/2005	2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	76
S-12@2.5'	5/4/2005	2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	140
S-13 @ 6 ft	5/18/2005	6	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	3.23
S-14 @ 2.8 ft	5/18/2005	2.8	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	474
S-15 @ 1.9 ft	5/18/2005	1.9	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	313
S-16 @ 3 ft	5/18/2005	3	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	49.9
S-17 @ 1.9 ft	5/18/2005	1.9	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	202
S-18 @ 5 ft	5/18/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	5.02
SS-1@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	4.3
SS-2@3'	8/9/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	5.1
SS-3@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	480
SS-4@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	340
SS-5@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	76
SS-6@3'	8/9/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	49
SS-7@3'	8/9/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	89
SS-8@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-9@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	3.6
SS-10@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	4.2
SS-11@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-12@1.8FT	10/24/2005	1.8	NA	NA	NA	NA	NA	NA	NA	NA	14
SS-13@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	480
SS-14@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	27

Table 1
Summary of Soil Analytical Data
Pothole and Over-Excavation Samples
Former Shell Service Station
318 South Livermore Avenue, 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)	EDB (ug/kg)	1,2-DCA (mg/kg)	Lead (mg/kg)
Over-Excavation Confirmation Samples (Continued)											
SS-15@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	110
SS-16@5.5FT	10/24/2005	5.5	NA	NA	NA	NA	NA	NA	NA	NA	6.6
SS-17@5.5FT	10/24/2005	5.5	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-18@5.5FT	10/24/2005	5.5	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-19@2.1FT	10/24/2005	2.1	2,000	<0.5	<0.5	3.1	24	<0.5	<500	<0.5	150
SS-20@1.9FT	10/24/2005	1.9	NA	NA	NA	NA	NA	NA	NA	NA	7.8
SS-21@2.1FT	10/24/2005	2.1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	170
SS-22@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	7.2
SS-23@5'	2/23/2006	5	NA	NA	NA	NA	NA	NA	NA	NA	<10
SS-24@5'	2/23/2006	5	NA	NA	NA	NA	NA	NA	NA	NA	<10
SS-25@5'	2/23/2006	5	NA	NA	NA	NA	NA	NA	NA	NA	<10
SS-26@2'	2/23/2006	2	NA	NA	NA	NA	NA	NA	NA	NA	<10
SS-27@2'	2/23/2006	2	NA	NA	NA	NA	NA	NA	NA	NA	17
SS-28@2'	2/23/2006	2	NA	NA	NA	NA	NA	NA	NA	NA	28
SS-29@2'	2/23/2006	2	NA	NA	NA	NA	NA	NA	NA	NA	<10
SS-30@5'	2/23/2006	5	NA	NA	NA	NA	NA	NA	NA	NA	<10
SS-31@2'	2/23/2006	2	NA	NA	NA	NA	NA	NA	NA	NA	83
SS-32@2'	2/23/2006	2	NA	NA	NA	NA	NA	NA	NA	NA	71
Pothole Soil Samples											
PH-1@2.5'	6/7/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	12.3
PH-2@3'	6/7/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	4.62
PH-3@2.5'	6/7/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	4.97
PH-4@3'	6/7/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	1,040
PH-5@2'	6/7/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	5.09
PH-6@5'	6/7/2005	5	NA	NA	NA	NA	NA	NA	NA	NA	5.21
PH-7@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	3.62
PH-7@5.0'	8/8/2005	5	NA	NA	NA	NA	NA	NA	NA	NA	2.79
PH-7@7.0'	8/8/2005	7	NA	NA	NA	NA	NA	NA	NA	NA	13.3
PH-8@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	4.68
PH-9@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	8.87
PH-10@2.5'	8/8/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	5.72
PH-11@2.5'	8/8/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	4.89

Table 1
Summary of Soil Analytical Data
Pothole and Over-Excavation Samples
Former Shell Service Station
318 South Livermore Avenue, 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)	EDB (ug/kg)	1,2-DCA (mg/kg)	Lead (mg/kg)
Pothole Soil Samples (Continued)											
PH-12@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	**3.7**
PH-13@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	**3.06**
PH-14@5.0'	8/8/2005	5	NA	NA	NA	NA	NA	NA	NA	NA	**7.73**
PH-14B@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	**5**

Notes:
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
TPH-G = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
NA = not analyzed
EDB = Ethylene Dibromide
1,2-DCA = 1,2-Dichloroethane
sample over-excavated

Table 2
Summary of Groundwater Analytical Data
Borings B-1 through B-3
Former Shell Service Station
318 South Livermore Avenue, Livermore, California

Sample Designation	Date Sampled	Sample Interval (feet)	TPH-G (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Xylene (ug/l)	MTBE (ug/l)	TBA (ug/l)	EDB (ug/l)	1,2-DCA (ug/l)	Lead (ug/l)
Groundwater Grab Samples												
B-1@30'	6/2/2005	29-30	**83**	**8.4**	**1.1**	**1.1**	**2.9**	**1.5**	<5.0	<0.02	<0.5	**0.21**
B-1@40.5'	6/3/2005	38-40.5	**130**	<0.5	<0.5	<0.5	<1	**5**	<5.0	<0.02	**81**	**0.12**
B-2@25'	6/2/2005	25	<50	<0.5	<0.5	<0.5	<1	<0.5	<5.0	<0.02	<0.5	**0.56**
B-3@31'	6/3/2005	29.5-31	**240**	**2.4**	<0.5	**0.73**	<1	**2**	<5.0	<0.02	**0.64**	NA
GRAB B-3@31'	6/3/2005	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.094**
HYDROPUNCH B-3@31'	6/3/2005	29.5-31	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.22**
B-3@51'	6/3/2005	49-51	<50	<0.5	<0.5	<0.5	<1	<0.5	<5.0	<0.02	<0.5	**0.032**

Notes:
ug/l = micrograms per liter
NA = not analyzed
TPH-G = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
TBA = Tert-butanol
EDB = Ethylene Dibromide
1,2-DCA = 1,2-Dichloroethane
Sample GRAB B-3@31' was collected in case Sample HYDROPUNCH B-3@31' did not contain a sufficient amount of groundwater for lead analysis

ATTACHMENT 5

WELL CONCENTRATIONS
Former Shell Service Station
318 South Livermore Avenue
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-5	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-5	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	34.85	460.62
MW-5	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	37.26	458.21
MW-5	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	27.30	468.17
MW-5	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	27.84	467.63
MW-5	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	30.54	464.93
MW-5	11/13/2003	60	<0.50	1.5	1.7	9.6	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	33.94	461.53
MW-5	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	26.59	468.88
MW-5	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	25.44	470.03
MW-5	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	32.34	463.13
MW-5	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	33.24	462.23
MW-5	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	26.80	468.67
MW-5	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	495.47	22.58	472.89
MW-5	10/07/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	28.78	466.69
MW-5	01/10/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	495.47	23.70	471.77
MW-5	**04/03/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**495.47**	**21.31**	**474.16**
MW-6	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-6	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	35.41	462.16
MW-6	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	2.5	<2.0	<2.0	<2.0	<50	497.57	37.92	459.65
MW-6	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	27.71	469.86
MW-6	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	28.28	469.29
MW-6	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	30.56	467.01
MW-6	11/13/2003	90	<0.50	2.6	2.4	12	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	34.18	463.39
MW-6	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	27.16	470.41
MW-6	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	25.88	471.69

WELL CONCENTRATIONS
Former Shell Service Station
318 South Livermore Avenue
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-6	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	32.74	464.83
MW-6	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	33.75	463.82
MW-6	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	26.89	470.68
MW-6	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	497.57	23.05	474.52
MW-6	10/07/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	28.12	469.45
MW-6	01/10/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	497.57	25.84	471.73
MW-6	**04/03/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**497.57**	**22.09**	**475.48**
MW-7	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	1.2	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-7	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	2.0	<2.0	<2.0	<2.0	<50	495.58	34.29	461.29
MW-7	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	1.9	<2.0	<2.0	<2.0	<50	495.58	36.80	458.78
MW-7	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	0.89	<2.0	<2.0	<2.0	<50	495.58	26.75	468.83
MW-7	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	4.0	<2.0	<2.0	<2.0	<5.0	495.58	27.31	468.27
MW-7	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	3.2	<2.0	<2.0	<2.0	<5.0	495.58	30.02	465.56
MW-7	11/13/2003	72	<0.50	0.62	0.57	3.2	1.4	<2.0	<2.0	<2.0	<5.0	495.58	33.85	461.73
MW-7	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.85	NA	NA	NA	NA	495.58	27.13	468.45
MW-7	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	0.71	NA	NA	NA	NA	495.58	25.13	470.45
MW-7	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	1.8	NA	NA	NA	NA	495.58	31.68	463.90
MW-7	11/11/2004	75	<0.50	<0.50	<0.50	<1.0	2.2	<2.0	<2.0	<2.0	<5.0	495.58	32.92	462.66
MW-7	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	1.8	<2.0	<2.0	<2.0	<5.0	495.58	26.60	468.98
MW-7	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	0.87	<0.50	<0.50	<0.50	<5.0	495.58	23.25	472.33
MW-7	10/07/2005	77	<0.50	<0.50	<0.50	<1.0	0.70	<2.0	<2.0	<2.0	<5.0	495.58	27.76	467.82
MW-7	01/10/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	495.58	22.78	472.80
MW-7	**04/03/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**495.58**	**20.05**	**475.53**
MW-8	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
318 South Livermore Avenue
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-8	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	6.9	<2.0	<2.0	<2.0	<50	494.90	34.46	460.44
MW-8	10/25/2002	140	<0.50	<0.50	<0.50	<0.50	2.2	3.3	<2.0	<2.0	<50	494.90	36.98	457.92
MW-8	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	494.90	27.35	467.55
MW-8	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.67	<2.0	<2.0	<2.0	<5.0	494.90	27.44	467.46
MW-8	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.50	<2.0	<2.0	<2.0	<5.0	494.90	32.29	462.61
MW-8	11/13/2003	260	1.5	2.3	2.9	16	1.4	<2.0	<2.0	<2.0	<5.0	494.90	33.08	461.82
MW-8	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.92	NA	NA	NA	NA	494.90	26.18	468.72
MW-8	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	494.90	25.10	469.80
MW-8	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	494.90	31.97	462.93
MW-8	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	0.82	<2.0	<2.0	<2.0	<5.0	494.90	32.80	462.10
MW-8	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	494.90	26.00	468.90
MW-8	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	494.90	22.81	472.09
MW-8	10/07/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	494.90	29.05	465.85
MW-8	01/10/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	494.90	22.61	472.29
MW-8	**04/03/2006**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**494.90**	**21.40**	**473.50**

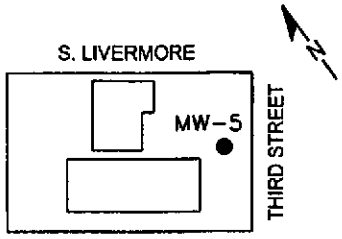
MW-9	09/19/2005	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27.89	NA
MW-9	09/23/2005	290	53	2.7	7.8	34	12	<2.0	<2.0	<2.0	14	NA	27.95	NA
MW-9	10/07/2005	400	42	1.2	3.7	22	12	<2.0	<2.0	<2.0	9.4	494.77	28.13	466.64
MW-9	01/10/2006	770	68	7.7	3.4	24	5.9	<0.50	<0.50	<0.50	<20	494.77	22.44	472.33
MW-9	**04/03/2006**	**514**	**16.6**	**1.97**	**2.37**	**6.08**	**3.50**	**<0.500**	**<0.500**	**<0.500**	**<10.0**	**494.77**	**22.35**	**472.42**

WELL CONCENTRATIONS
Former Shell Service Station
318 South Livermore Avenue
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)

Abbreviations:
TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B.
BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B.
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B
ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B
TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B
TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B
TOC = Top of Casing Elevation
GW = Groundwater
ug/L = Parts per billion
MSL = Mean sea level
ft. = Feet
<n = Below detection limit
NA = Not applicable

Notes:
Survey data provided by KHM Environmental Management, Inc.



LOCATION MAP

IT CORPORATION

BORING NO. MW-5
PAGE 1 OF 3

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: 9-13-01 and 9-14-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER: 8"
HOLE DEPTH: 56.5'
WELL DIAMETER: 2"
WELL DEPTH: 55.5'
CASING STICKUP: NA

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT	RECOVERY	PENETRATION (BLOWS/ 6")	DEPTH (FEET)	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
					0			Asphalt
	No		0.0				GM	SANDY SILTY GRAVEL: medium brown; 15% fines; 35-40% coarse to fine gravel; 25% medium sand; 15% coarse sand; 5-10% cobbles; loose
					2			
					4			
	No	Dry		6				
	No	Dry		8				
	No	Mst	0.0	10	6			
	No	Mst		6				
	No	Mst	0.0	19				
	No	Dmp		24				
	No	Dry	0.0	18	8			
	No	Dmp		25				
	No	Dmp	0.0	30				
				41				
	No	Dmp	0.0	18	10			
	No	Dmp		24				
	No	Mst	0.0	35				
	No	Dry		18				
Grout	No	Dmp/Mst	0.0	26	12			
	No	Dmp/Mst		20				
				6				
		Dry		8				
	No	Mst	0.0	13	14		ML	CLAYEY SILT: medium to dark brown; low plasticity; trace coarse sand; minor iron oxide staining; 10-15% fine sand; stiff
	No	Mst		14				
	No	Mst	0.0	8				
	No	Mst		13				
	No	Mst	0.0	15	16		ML	CLAYEY SILT: light to medium brown; low plasticity; 15-20% fine sand; firm to stiff
	No	Mst		4				
	No	Mst	0.0	8			ML	CLAYEY SILT: medium brown; low plasticity; 10-15% fine sand; firm to stiff
	No	Mst		10				
				7	18			
				9				
	No	Mst	0.0	10				
	No	Mst		10				
	No	Mst	0.0	5	20			
	No	Mst		6			ML	CLAYEY SANDY SILT: medium brown; low plasticity; 20-25% fine sand; trace coarse sand; firm
	No	Mst	0.0	7				
	No	Mst		5				
	No	Mst	0.0	5	22			

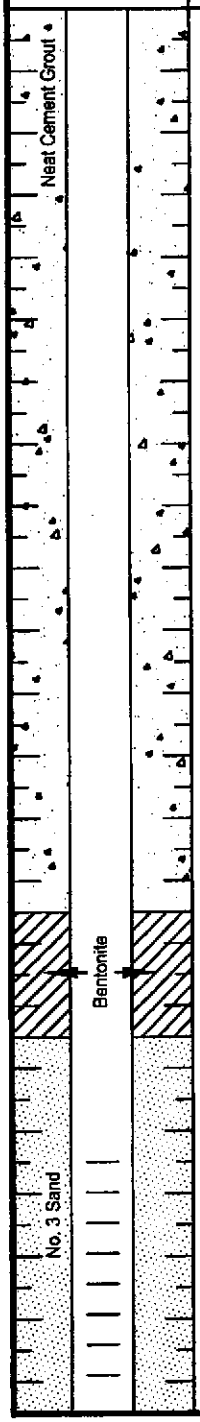
ATTACHMENT B

/ N:\Logs\830053\318Livermore\MW-5-1.dwg Mon, 25/Feb/02 12:40pm lwahlgren

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-13-01 and 9-14-01
LOCATION: 318 S. LIVERMORE AVE.
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1

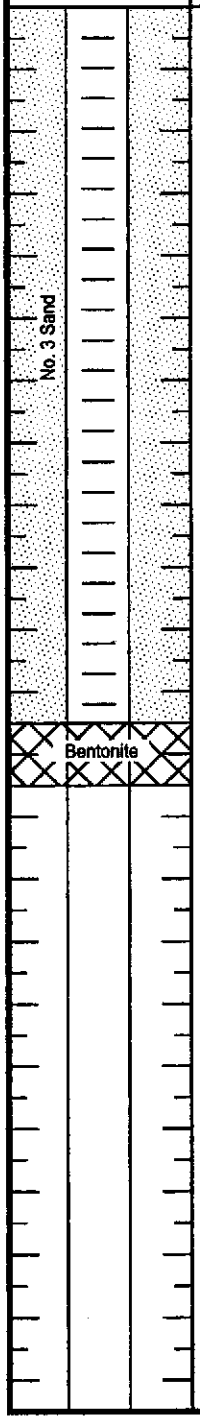


DEPTH (FEET)	PRODUCT ODOR	MOISTURE CONTENT	RECOVERY	PENETRATION (BLOWS/ 6")	SOIL TYPE	LITHOLOGY/REMARKS
	No	Mst	0.0	5		
	No	Wet		10	ML	As above
	No	Wet	0.0	5		
	No	Wet		7		
24	No	Wet	0.0	8	ML	CLAYEY SANDY SILT: medium to dark brown; low plasticity; trace fine gravel; 20% coarse to fine sand; firm to stiff
	No	Wet		10		
	No	Mst	0.0	8		
	No	Mst		10		
26	No	Mst	0.0	16		
	No	Wet		9	ML	SANDY SILT: medium yellow-brown; low plasticity; 30% coarse to fine sand; stiff
	No	Wet	0.0	9		
	No	Wet		15		
28	No	Wet	0.0	18	GC	CLAYEY SANDY GRAVEL: gray-brown; 25-30% fines; 35-40% coarse to fine gravel; 20% medium to fine sand; 10-15% coarse sand; medium dense
	No	Wet		24		
				26		
				26		
30	No	Wet	0.0	18		
	No	Wet		24		
				28		
	No	Mst	0.0	8	CL	SILTY CLAY: medium orange-brown; low plasticity; trace to 10% medium sand; 10% fine sand; stiff
32	No	Mst		12		
	No	Mst	0.0	17		
	No	Mst		5	CL	SILTY CLAY: gray-brown; low plasticity; trace coarse sand; trace medium sand; 10-25% fine sand; soft to firm
	No	Mst	0.0	5		
34	No	Mst		6		
	No	Mst	0.0	7		
	No	Mst		3		
	No	Mst	0.0	4		
36	No	Mst		5		
	No	Mst	0.0	4		
	No	Mst		7	SC	Sand lens
	No	Mst		9		
38	No	Mst	Dead	3	CL	As above
	No	Mst		6		
	No	Mst		7		
	No	Mst		10		
40	No	Mst		3		
	No	Mst		3		
	No	Mst		6		
	No	Mst		8		
42	No	Mst		8		
	No	Mst		9		
	No	Mst		3		
	No	Mst		6		
44	No	Mst		7		

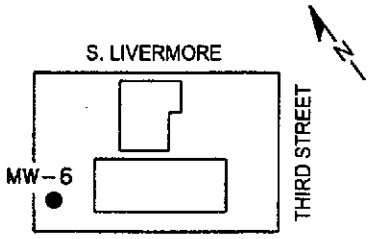
PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-13-01 and 9-14-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1



PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	SOIL TYPE	LITHOLOGY/REMARKS
No	Mst		7		CL	As above
No	Mst		9			
No	Wet		5			
No	Wet		9			
No	Wet		14	46 ▽		
No	Wet		3			
No	Wet		6			
No	Sat		8			
No	Wet		7	48	CL	GRAVELLY SANDY CLAY: dark brown; low plasticity; 25% coarse to fine gravel; 20% coarse to medium sand; stiff
No	Wet		10			
No	Wet		16			
No	Sat	0.0	17	50	CL	SILTY SANDY CLAY: medium brown; low plasticity; 20-25% fine sand; 10-15% medium sand; trace to 10% coarse sand; trace fine gravel; trace coarse gravel; firm to stiff
No	Sat		9			
No	Sat	0.0	10			
No	Sat		12			
No	Wet	0.0	4	52		
No	Wet		5			
No	Sat	0.0	6			
No	Wet		6		CL	SANDY CLAY: gray-brown to yellow-brown; low plasticity; 25-35% fine sand; 5-15% coarse to medium sand; trace fine to coarse gravel; firm to stiff
No	Wet	0.0	7	54		
No	Sat		12			
No	Wet	0.0	14			SANDY CLAY (55'): gray-brown; low plasticity; 15-20% fine sand; 15% medium sand; 10-15% coarse sand; trace to 10% fine gravel; trace coarse gravel; firm to stiff
No	Wet		6		CL	
No	Wet	0.0	9	56		
			12			
						BOTTOM OF HOLE=56.5'
				58		



LOCATION MAP

IT CORPORATION

BORING NO. MW-6
PAGE 1 OF 3

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: 9-17-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER: 8"
HOLE DEPTH: 53.5'
WELL DIAMETER: 2"
WELL DEPTH: 53.5'
CASING STICKUP: NA

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT	RECOVERY	PENETRATION (BLOWS/ 6")	DEPTH (FEET)	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
					0			Asphalt
					1			Fill
					2		GM	SANDY SILTY GRAVEL: medium brown to gray-brown; 15-20% fines; 30% fine gravel; 10-15% coarse gravel; 30-35% sand; trace to 10% cobbles; medium dense
					3			
					4			
	No	Dry		8	5			
	No	Dry	0.0	15	6			
	No	Dry		17	7			
					8			
	No	Dry		18	9			
	No	Dmp	0.0	19	10			Iron oxide staining
	No	Dmp		20	11			
Grout					12			
	No	Dmp		13	13			
	No	Dmp	0.0	18	14			
	No	Dmp		19	15			
					16			
					17		ML	CLAYEY SANDY SILT: medium to dark brown; low plasticity; 15-20% fine sand; trace coarse sand; firm
					18			
	No	Dmp		7	19			
	No	Dmp	0.0	8	20			
	No	Dmp		8	21			
					22		ML	CLAYEY SANDY SILT: orange-brown; low plasticity; 20-25% fine sand; firm

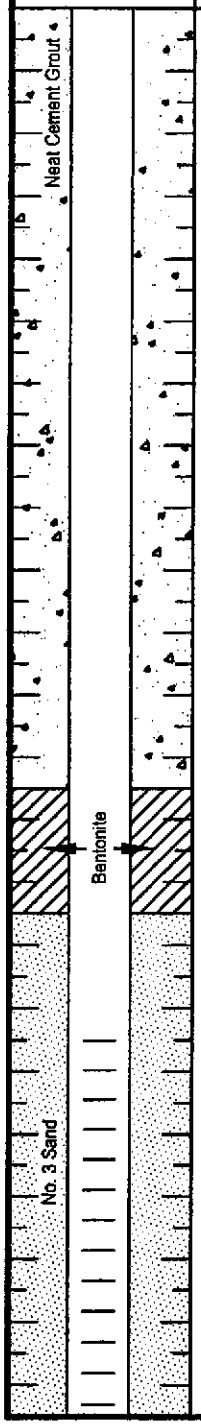
IT CORPORATION

BORING NO. MW-6
PAGE 2 OF 3

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-17-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1



PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	SOIL TYPE	LITHOLOGY/REMARKS
No	Mst		5	24	ML	CLAYEY SANDY SILT: orange-brown; low plasticity; 20-25% fine sand; firm
No	Mst	0.0	5			
No	Mst		5			
				26		
					GC	CLAYEY SANDY GRAVEL: gray-brown; low plasticity; 25-30% fines; 30-35% fine gravel; 5-10% coarse gravel; 20% medium to fine sand; 10-15% coarse sand; trace cobbles; medium dense
No	Mst		27	28		
No	Mst	0.0	32			
No	Mst		38			
				30	CL	SANDY CLAY: medium to dark brown; low plasticity; 25% coarse sand; 10% fine to medium sand; trace to 10% gravel
				32		
					CL	SILTY CLAY: medium brown; low plasticity; 20% fine sand; trace medium sand; firm
No	Mst		4	34		
No	Mst	0.0	5			
No	Mst		5			
				36		
				38		
No	Mst				CL	SANDY SILTY CLAY: yellow-brown; low plasticity; 30% fine to medium sand; trace to 10% coarse sand
No	Mst	0.0				
No	Mst			40		
				42		
No	Mst		5	44	CL	SILTY CLAY: yellow-brown to gray-brown; low plasticity; 10-15% fine sand; trace to 5% medium sand; firm
No	Mst	0.0	6			

IT CORPORATION

BORING NO. MW-6
PAGE 3 OF 3

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-13-01 and 9-14-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
	No	Mst	0.0	6				CL	SILTY CLAY: yellow-brown to gray-brown; low plasticity; 10-15% fine sand; trace to 5% medium sand; firm
	No	Mst		8	46				
					▽				
					48				
No. 3 Sand	No	Wet							As above
	No	Wet	0.0		50				
	No	Wet							
					52				
					54				BOTTOM OF HOLE=53.5'

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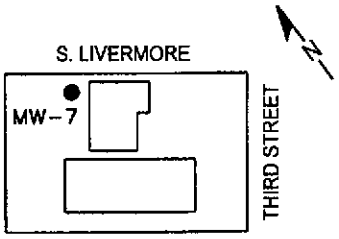


LOCATION MAP

IT CORPORATION

BORING NO. MW-7
PAGE 1 OF 3

PROJECT NO: 830053	CLIENT: EQUIVA
LOGGED BY: RMB	DATE DRILLED: 9-17-01
DRILLER: WDC	LOCATION: 318 S. LIVERMORE AVE..
DRILLING METHOD: HSA	HOLE DIAMETER: 8"
SAMPLING METHOD: CAL MOD	HOLE DEPTH: 53.5'
CASING TYPE: SCH 40 PVC	WELL DIAMETER: 2"
SLOT SIZE: 0.02"	WELL DEPTH: 51.5'
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
					0					Asphalt and fill
					2				GM	SANDY SILTY GRAVEL: medium brown; 15-20% fines; 30% fine gravel; 10% coarse gravel; 30% sand; trace to 10% cobbles; loose
					4					
	No	Dmp		9						
	No	Dmp	0.0	9	6					
	No	Dmp		10						
					8					
				50						Hit cobble
Grout					10					
					12					
				9						Cobble still blocking sampler; No product odor in cuttings
				10	14					
				14						
					16					
					18					
	No	Mst	0.0	9					ML	CLAYEY SANDY SILT: medium brown; low plasticity; 10-15% fine sand; trace coarse sand; stiff
				15						
				17	20					
					22				ML	CLAYEY SANDY SILT: medium to dark brown; low plasticity; 10-15% medium to fine sand; 10% coarse sand; trace to 10% gravel; stiff

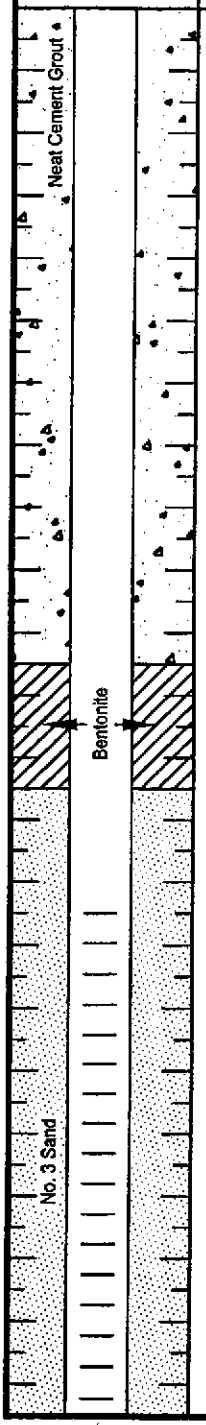
IT CORPORATION

BORING NO. MW-7
PAGE 2 OF 3

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-17-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1



WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT	RECOVERY	PENETRATION (BLOWS/ 6")	DEPTH (FEET)	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
	No	Mst	0.0	8 12 21	24		ML	CLAYEY SANDY SILT: medium to dark brown; low plasticity; 10-15% medium to fine sand; 10% coarse sand; trace to 10% gravel; stiff
					26			
					28		GC	CLAYEY SANDY GRAVEL: gray-brown; low plasticity; 25-30% fines; 30-35% fine gravel; 5-10% coarse gravel; 20% medium to fine sand; 10-15% coarse sand; trace cobbles; medium dense
	No	Mst	0.0	20				
	No	Mst		22				
	No	Mst		30	30			
					32		CL	SILTY CLAY: medium brown; low plasticity; 15% fine sand; gray streaks indicative of old contamination; very faint odor in some areas; trace to 10% medium to coarse sand; firm
	No	Mst		4				
	Slt	Mst	0.0	7	34			
	Slt	Mst		9				
					36			
					38			
	No	Mst	0.0	3				As above
	No	Mst		4				
	No	Mst		6	40			
					42			
	No	Mst		4				As above
	No	Mst	0.0	7	44			

IT CORPORATION

BORING NO. MW-7
PAGE 3 OF 3

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-17-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
	No	Mst	0.0	7						
	No	Mst		12					CL	SILTY CLAY: medium brown; low plasticity; 15% fine sand; gray streaks indicative of old contamination; very faint odor in some areas; trace to 10% medium to coarse sand; firm
					46 ▽					
					48					
No. 3 Sand	No	Wet		4					CL	SANDY CLAY: yellow-brown; low plasticity; 25% medium to fine sand; 5-10% coarse sand; 10-15% fine gravel; trace coarse gravel; firm to stiff
	No	Wet	0.0	7						
	No	Wet		10	50					
Backfilled with Bentonite					52					
					54					BOTTOM OF HOLE=53.5'

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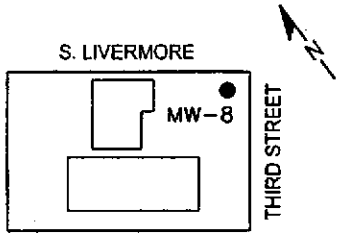


LOCATION MAP

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: 9-18-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER: 8"
HOLE DEPTH: 51.5'
WELL DIAMETER: 2"
WELL DEPTH: 51.5'
CASING STICKUP: NA

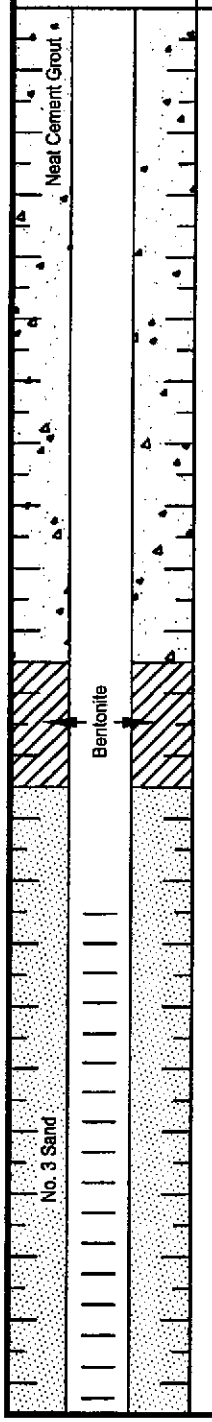
WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
										Logged from cuttings
										Asphalt
					2				GM	SANDY SILTY GRAVEL: medium brown to gray-brown; 15-20% fines; 30% fine gravel; 15% coarse gravel; 30% sand; 5-10% cobbles
					4					
					6					As above
					8					
					10					As above
Grout					12					
					14					
					16				ML	CLAYEY SANDY SILT: medium brown; low plasticity; 15-20% fine sand; trace coarse sand; dry to damp; no product odor
					18					
					20					As above; damp to moist; no product odor; PID=0.0
					22					

IT CORPORATION

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-18-01
LOCATION: 318 S. LIVERMORE AVE..
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1



WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT	RECOVERY	PENETRATION (BLOWS/ 6")	DEPTH (FEET)	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
					24			ML	As above; moist; no product odor; PID=0.0
					26				
					28			GC	Gravel present; indicative of GC layer; found in the other three borings
					30				
					32			CL	SILTY CLAY: light brown; low plasticity; 15% fine sand; trace fine gravel; trace to 10% medium coarse sand; moist; no product odor; PID=0.0
	No	Mst	0.0	6	34			CL	SILTY CLAY: medium brown to light brown; low plasticity; gray streaks; 15-20% fine sand
	Slt	Mst	0.0	10					
				15					
					36				
					38				
	No	Mst	0.0	8					As above; medium brown; no gray streaks
	No	Mst	0.0	12					
	No	Mst	0.0	15	40				
					42				
					44				

IT CORPORATION

BORING NO. MW-8
PAGE 3 OF 3

PROJECT NO: 830053
LOGGED BY: RMB
DRILLER: WDC
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT: EQUIVA
DATE DRILLED: 9-18-01
LOCATION: 318 S. LIVERMORE AVE.,
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

LOCATION MAP See page 1

WELL COMPLETION	PRODUCT ODOR	MOISTURE CONTENT		PENETRATION (BLOWS/ 6")	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY/REMARKS
No. 3 Sand					46				CL	As above; no gray streaks; moist; no product odor; PID=0.0
					48					
					50					
					52					BOTTOM OF HOLE=51.5'
					54					

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Delta

Environmental Consultants, Inc.

Project No:	SJ31-8LI-1	Client:	Shell Oil Products US	Boring No: B-1	
Logged By:	Heather Buckingham	Location:	318 S. Livermore Ave., Livermore	Page 1 of 2	
Driller:	BC2	Date Drilled:	6/2/2005	Location Map	
Drilling Method:	HSA	Hole Diameter:	8-inch	Please see site map	
Sampling Method:	CA mod. Split shoe	Hole Depth:	37 ft		
Casing Type:		Well Diameter:			
Slot Size:		Well Depth:			
Gravel Pack:		Casing Stickup:			
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	Asphalt ~4"
		dry			1			SW	**Well Graded SAND with Gravel**: dark brown; 40% gravels 1/4" in length; trace gravels up to 1.5 inch in length
				air knifed & hand augered	2				
					3				
					4				
Grout		dry	0		5				(medium brown)
					6				
					7				
					8				
					9				
				17	10				
		dry	0	22				GW	**GRAVEL with Silt and Sand**: dark tan; 10-15% silt; 20-25% well graded sand; 50% gravel up to 0.5 inch in length; dense
				24	11				
					12				
					13				
					14				
				12	15				
		dry	0	14				CL	**Lean CLAY**: medium brown; ~10% fine grained sand; low to moderate plasticity; very stiff
				18	16				
					17				
					18				
					19				
				16	20				
		dry	0	16					(medium brown with orange mottling)
				21	21				
					22				

Delta
Environmental Consultants, Inc.

Project No:	SJ31-8LI-1	Client:	Shell Oil Products US	Boring No: B-1	
Logged By:	Heather Buckingham	Location:	318 S. Livermore Ave., Livermore	Page 2 of 2	
Driller:	BC2	Date Drilled:	6/2/2005	Location Map	
Drilling Method:	HSA	Hole Diameter:	8-inch	Please see site map	
Sampling Method:	CA mod. Split shoe	Hole Depth:	37 ft		
Casing Type:		Well Diameter:			
Slot Size:		Well Depth:			
Gravel Pack:		Casing Stickup:			
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					23			CL	**Lean CLAY** (Continued)
					24				
			1.4	12	25				(~10% gravels up to 1 inch in length)
		dry		18					
	▼			18	26				
					27				
					28				
					29				
				19	30			GW	**Well Graded GRAVEL with Sand and Silt**: brownish
		wet	1.8	30					gray; 10-15% fines; 30-40% coarse grained sand;
				36	31				40-50% gravels up to 1 cm in length; hard
					32				
					33				
					34				
					35			CL	**Lean CLAY**: as above
		dry	0						
					36				Boring terminated at 37 feet bg
					37				Hydropunch sampler pushed to 40.5 feet bg
					38				
					39				
					40				
					41				
					42				
					43				
					44				

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Project No:	SJ31-8LI-1	Client:	Shell Oil Products US	Boring No: B-2	
Logged By:	Heather Buckingham	Location:	318 S. Livermore Ave., Livermore	Page 1 of 2	
Driller:	BC2	Date Drilled:	6/2/2005	Location Map	
Drilling Method:	HSA	Hole Diameter:	8-inch	Please see site map	
Sampling Method:	CA mod. Split shoe	Hole Depth:	31 ft		
Casing Type:		Well Diameter:			
Slot Size:		Well Depth:			
Gravel Pack:		Casing Stickup:			
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				air knifed & hand augered	1			GW	**Well Graded GRAVEL with Silt and Sand**: dark brown; 10-15% fines; 20-30% coarse grained sands; 65-70% rounded gravels ranging from 1 cm to 2 inches in diameter
					2				
					3				
					4				
		dry	0		5				(medium brown)
					6				
					7			GW	**Well Graded GRAVEL with Sand**: light brown; 20-30% coarse grained sand; 70-80% gravels ranging from 1/4" to 2 inch in length;
					8				
				31	9				
		dry	0	40					
		moist		50					
				17	10			GW	**Well Graded GRAVEL with Silt and Sand**: medium brown; 10-15% fines; ~20% well graded sands; ~60-70% gravels 1/4" in length; trace gravels up to 1/2" length; medium dense
		damp		28					
		wet	0.5	32	11				
				12					
		damp	0	18	12				
				21					
				13	13				
		damp		16					
			0	20	14			CL	**Lean CLAY**: medium brown; ~10% fine grained sand; low to moderate plasticity; stiff
				21					
		damp	0.2	9	15				
				11					
				13	16				
		damp	0	12					
				12	17				
				15					(medium brown with dark brown and orange mottling)
		damp	0	11	18				
				13					
				16	19				
		damp	0.1	18					
					20				(trace fine gravels)
	▼				21				
					22				

Delta
Environmental Consultants, Inc.

Project No:	SJ31-8LI-1	Client:	Shell Oil Products US	Boring No: B-2	
Logged By:	Heather Buckingham	Location:	318 S. Livermore Ave., Livermore	Page 2 of 2	
Driller:	BC2	Date Drilled:	6/2/2005	Location Map	
Drilling Method:	HSA	Hole Diameter:	8-inch	Please see site map	
Sampling Method:	CA mod. Split shoe	Hole Depth:	31 ft		
Casing Type:		Well Diameter:			
Slot Size:		Well Depth:			
Gravel Pack:		Casing Stickup:			
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					23			CL	**Lean CLAY** (Continued)
					24				
				6	25				
		wet	0.3	10					(grades coarser (~10% gravels))
				11	26				
					27				
					28				
					29				
				19	30			GM	**Silty GRAVEL with Sand**: medium brown/tan; medium
		wet	0	30					dense; 20-30% fines; 10-20% coarse grained sand;
				36	31				40-50% gravels up to 1" in length
									Boring terminated at 31 feet bg
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta
Environmental Consultants, Inc.

Project No:	SJ31-8LI-1	Client:	Shell Oil Products US	Boring No: B-3	
Logged By:	Heather Buckingham	Location:	318 S. Livermore Ave., Livermore	Page 1 of 3	
Driller:	BC2	Date Drilled:	6/3/2005	Location Map	
Drilling Method:	HSA	Hole Diameter:	8-inch	Please see site map	
Sampling Method:	CA mod. Split shoe	Hole Depth:	47 ft		
Casing Type:		Well Diameter:			
Slot Size:		Well Depth:			
Gravel Pack:		Casing Stickup:			
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	Asphalt 4"
					1			SW	**Well Graded SAND with Gravel**: medium brown; ~60% well graded sand; ~40% gravels (1/4" in length); rare gravels up to 1.5" in length
					2				
					3				
					4				
Grout		dry	0	air knifed & hand augered	5				
					6				
					7				
					8				
					9				
				17	10			GW	**Well Graded GRAVEL with Silt and Sand**: medium brown; 10-15% fines; ~20% well graded sands; ~60-70% gravels 1/4" in length; trace gravels up to 1/2" in length; medium dense
		dry	0.3	25					
				32	11				
					12				
					13				
					14				
				19	15			CL	**Lean CLAY with Sand**: medium brown; 10-20% fine grained sand; low to moderate plasticity; very stiff
		dry	0.4	20					
				25	16				
					17				
					18				
					19				
				10	20				
		dry	0.2	15					
				16	21			CL	**Sandy Lean CLAY**: light brown; 30-40% fine grained sand; trace coarse grained sand; slight plasticity; medium dense
					22				

Delta
Environmental Consultants, Inc.

Project No:	SJ31-8LI-1	Client:	Shell Oil Products US	Boring No: B-3
Logged By:	Heather Buckingham	Location:	318 S. Livermore Ave., Livermore	Page 2 of 3
Driller:	BC2	Date Drilled:	6/3/2005	
Drilling Method:	HSA	Hole Diameter:	8-inch	
Sampling Method:	CA mod. Split shoe	Hole Depth:	47 ft	
Casing Type:		Well Diameter:		
Slot Size:		Well Depth:		
Gravel Pack:		Casing Stickup:		

Location Map: Please see site map

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	▼				23			CL	**Sandy Lean CLAY** (Continued)
					24				
				12	25				
		wet	0.3	14				CL	**Lean CLAY**: light brown; 10-20% fine grained sand; low to moderate plasticity; stiff
				17	26				
					27				
					28				
					29				
				16	30			GM	**Silty GRAVEL with Sand**: brownish gray; 20-30% fine to medium grained sand; 60-70% gravels up to 1.5" in length; 10-20% silt; medium dense
		wet	0.9	16					
				31	31				
					32				
					33				
					34				
				12	35				
		wet	0.6	14				CL	**Lean CLAY with Sand**: medium brown; 10-20% fine grained sand; 65-75% fines; low plasticity; stiff
				18	36				
					37				
					38				
					39				
				10	40				
		moist	0.5	12					(grades to coarser grained sand, and traces of 1/4" gravel)
				17	41				
					42				
					43				
					44				

Delta
Environmental Consultants, Inc.

Project No:	SJ31-8LI-1	Client:	Shell Oil Products US	Boring No: B-3
Logged By:	Heather Buckingham	Location:	318 S. Livermore Ave., Livermore	Page 3 of 3
Driller:	BC2	Date Drilled:	6/3/2005	
Drilling Method:	HSA	Hole Diameter:	8-inch	
Sampling Method:	CA mod. Split shoe	Hole Depth:	47 ft	
Casing Type:		Well Diameter:		
Slot Size:		Well Depth:		
Gravel Pack:		Casing Stickup:		
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		moist	0.8	9 11 15	45 46 47			CL	**Sandy CLAY**: medium brown; 10-20% gray fine grained sand (pods); low to moderate plasticity; stiff
					48				Boring terminated at 47 feet bg Hydropunch sampler pushed to 51 feet bg
					49				
					50				
					51				
					52				
					53				
					54				
					55				
					56				
					57				
					58				
					59				
					60				
					61				
					62				
					63				
					64				
					65				
					66				