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Alameda County

JUN 2005

www.deltaenv.com

Environmental Health

Letter of Transmittal

To: Alameda County Health Care Services Agency Date: 6/17/2005
 Environmental Health Service - Environmental Protection
 1131 Harbor Bay Parkway, Suite 250 Job No: SJ31-8LI-1.2005
 Alameda, California 94502-6577

Attn: Jerry Wickham

We are sending the following items:

Date	Copies	Description
10-Jun-05	1	Quarterly Monitoring Report - Second Quarter 2005
		Former Shell-branded Service Station
		318 South Livermore Avenue
		Livermore, California

These are transmitted:

- For your Information
 For action specified below
 For review and comment
 For your use
 As requested

Remarks

Copies to: _____ By: Heather Buckingham

 _____ Title: Senior Staff Geologist

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RO 2525



Shell Oil Products US

Alameda County

JUN 21 2005

Environmental Health

June 10, 2005

**Re: Former Shell-branded Service Station
318 S. Livermore Avenue
Livermore, California**

Dear Mr. Jerry Wickham:

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

Sincerely,
Shell Oil Products US

A handwritten signature in black ink, appearing to read "Denis L. Brown", with a long horizontal flourish extending to the right.

Denis L. Brown
Sr. Environmental Engineer



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June 10, 2005
Project No. SJ31-8LI-1.2005

Mr. Jerry Wickham
Environmental Health Services – Environmental Protection
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Quarterly Monitoring Report – Second Quarter 2005**
Former Shell-branded Service Station
318 South Livermore Avenue
Livermore, California

Dear Mr. Wickham:

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared the following second quarter 2005 groundwater monitoring and sampling report for the above referenced site. A site location map is included as Figure 1.

BACKGROUND

On March 7, 2003, Shell received a notice of responsibility letter from the Alameda County Health Care Services Agency (ACHCSA) placing the site in the Local Oversight Program due to the presence of methyl tert-butyl ether (MTBE) in groundwater beneath the site. In a work plan, dated May 27, 2003, Delta proposed to continue quarterly sampling of site wells for the remainder of 2003 in order to monitor MTBE concentrations.

On December 10, 2003, site USTs, fuel dispensers, and associated product piping were removed. A fuel system removal report, dated January 16, 2004, was submitted by Delta to the ACHCSA.

QUARTERLY GROUND WATER MONITORING PROGRAM

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services (Blaine), at the direction of Delta, on April 13, 2005. Depth to groundwater was measured in Wells MW-5 through MW-8. Wells MW-1 through MW-4 were previously destroyed. Groundwater elevation data and contours are presented on Figure 2.

Groundwater samples were collected from Wells MW-5 through MW-8. Samples were submitted by Blaine to Kiff Analytical LLC (Kiff) in Davis, California for analysis for total purgeable petroleum hydrocarbons as gasoline (TPH-G); benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds); the fuel oxygenates MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and tertiary butyl alcohol (TBA), 1,2-Dichloroethane (DCA), and 1,2-Dibromoethane (EDB) using EPA Method 8260B. Benzene and MTBE concentrations in groundwater are presented on Figure 3.

Blaine's groundwater monitoring and sampling report, which includes historical and current groundwater elevation data, historical and current analytical results, and field data records for the current monitoring event, is included as Attachment A.

DISCUSSION

Depth to groundwater in site wells has decreased by an average of 3.65 feet since last quarter, consistent with historic water level fluctuations. The groundwater gradient on April 13, 2005 was toward the southwest at a magnitude of 0.02 feet/feet, consistent with previous data.

MTBE was detected only in Well MW-7, at a concentration of 0.87 micromilligrams per liter (ug/l). TPH-G and BTEX compounds were below laboratory detection limits in all site wells. Fuel oxygenates DIPE, ETBE, TAME, and TBA remain below laboratory detection limits for at least the seventh consecutive monitoring event. 1,2-DCA was detected in Well MW-7 at 1.2 ug/L.

At the request of the ACHCSA, Delta submitted a "Revised Investigation and Excavation Work Plan" dated November 3, 2004. In a letter dated December 20, 2004, the ACHCSA requested an addendum. A work plan addendum was submitted on January 20, 2005, and approved by the ACHCSA in a letter dated January 21, 2005. Excavation fieldwork commenced in May 2005, and investigative site borings are anticipated to be completed during June 2005. The results of the proposed field work will be included in a separate report.

DISCUSSION

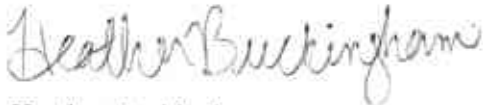
Delta requests that DIPE, ETBE, and TAME be eliminated from the sampling program. Delta also requests the sampling frequency be reduced to semi-annual in the second and fourth quarters. Analytical data has been very consistent from one quarter to the next.

REMARKS

The information contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

Please call if you have any questions regarding the contents of this letter.

Sincerely,
Delta Environmental Consultants, Inc.



Heather Buckingham
Senior Staff Geologist



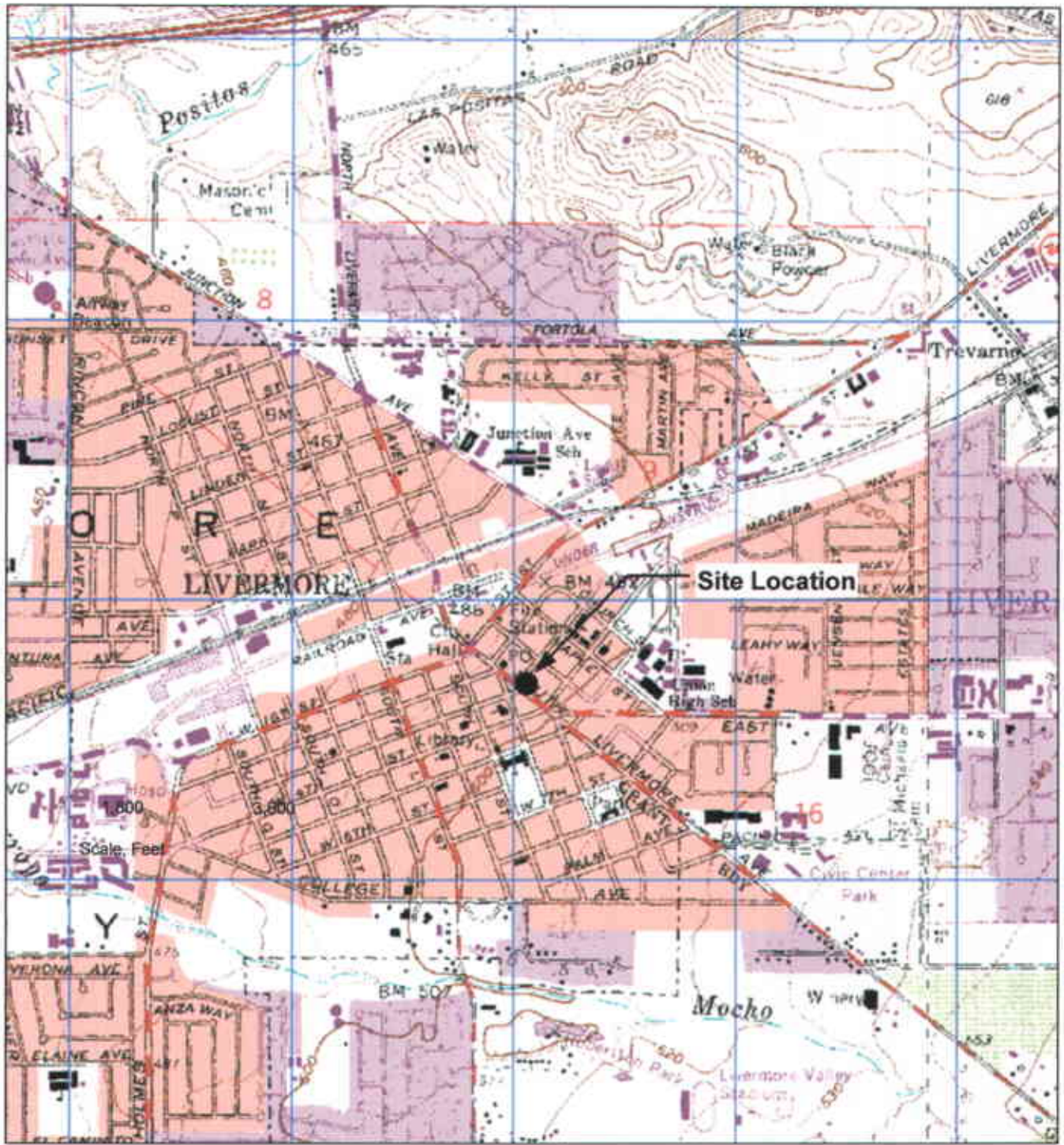
Debbie Arnold
Project Manager
PG 7745



- Attachments: Figure 1 – Site Location Map
Figure 2 – Groundwater Elevation Contour Map, January 26, 2005
Figure 3 – Benzene and MTBE Concentrations Map, January 26, 2005

Attachment A – Groundwater Monitoring and Sampling Report, March 10, 2005

cc: Denis Brown, Shell Oil Products US, Carson
Betty Graham, RWQCB, Oakland
Chris Davidson, Redevelopment Agency, City of Livermore, Livermore



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

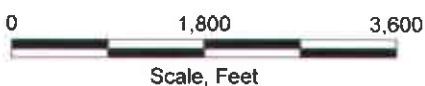


FIGURE 1
 SITE LOCATION MAP

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

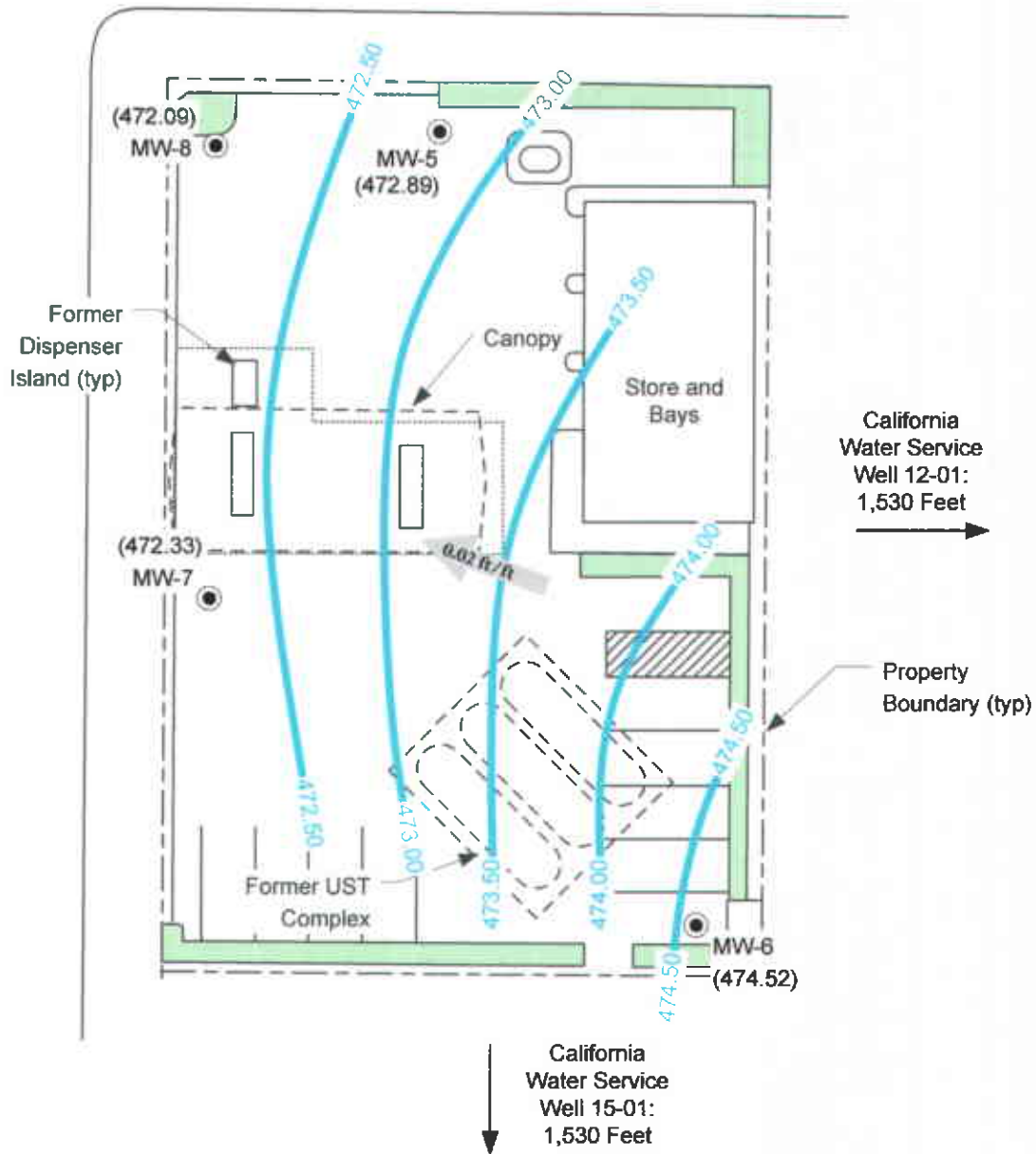
PROJECT NO. S.J31-BLI-1.2005	DRAWN BY VF 9/25/03
FILE NO. S.J31-BLI-1.2005	PREPARED BY VF
REVISION NO. 2	REVIEWED BY





Third Street

South Livermore Avenue



LEGEND

- MW-6 ● **GROUNDWATER MONITORING WELL**
- (462.29) **GROUNDWATER ELEVATION (MSL), 4/13/05**
- 467.00 — **GROUNDWATER ELEVATION CONTOUR**
- ← 0.012 ft/ft **APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT**



FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP,
APRIL 13, 2005
FORMER SHELL-BRANDED SERVICE STATION
318 South Livermore Avenue
Livermore, California

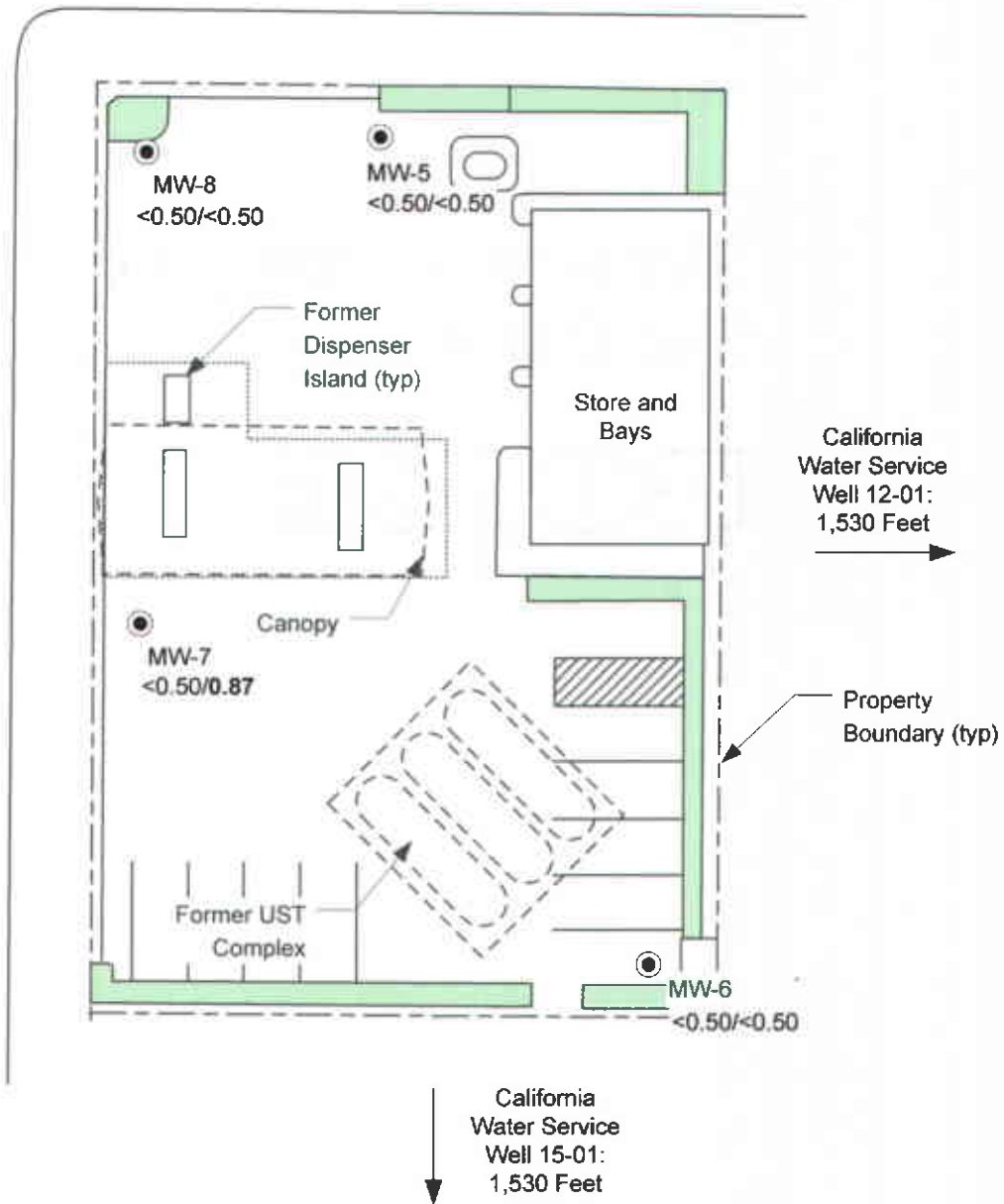
PROJECT NO. SJ31-8LJ-1 2005 FILE NO. SJ31-8LJ-1 2005 REVISION NO. 2	DRAWN BY VF 9/25/03 PREPARED BY VF REVIEWED BY
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Delta
Environmental
Consultants, Inc.



Third Street

South Livermore Avenue



LEGEND

MW-6 ● **GROUNDWATER MONITORING WELL**

<0.50/<0.50 **BENZENE / MTBE CONCENTRATIONS IN GROUNDWATER (UG/L), 4/13/05**



FIGURE 3
BENZENE AND MTBE CONCENTRATION MAP,
APRIL 13, 2005

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

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

Delta
Environmental Consultants, Inc.

Attachment A

GROUNDWATER MONITORING AND SAMPLING REPORT

BLAINE

TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

May 3, 2005

Denis Brown
Shell Oil Products US
20945 South Wilmington Ave.
Carson, CA 90810

Second Quarter 2005 Groundwater Monitoring at
Shell-branded Service Station
318 South Livermore Avenue
Livermore, CA

Monitoring performed on April 13, 2005

Groundwater Monitoring Report **050413-PC-3**

This report covers the routine monitoring of groundwater wells at this Shell-branded facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Leon Gearhart
Project Coordinator

LG/jn

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Debbie Arnold
Delta Environmental
175 Bernal Road, Suite 200
San Jose, CA 95119

WELL CONCENTRATIONS
Shell-branded 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-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
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

WELL CONCENTRATIONS
Shell-branded 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	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-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-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
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

WELL CONCENTRATIONS
Shell-branded 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	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

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.



Report Number : 43407

Date : 4/26/2005

Leon Gearhart
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 4 Water Samples
Project Name : 318 S. Livermore Ave., Livermore
Project Number : 050413-PC3
P.O. Number : 97464709

Dear Mr. Gearhart,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Jbel Kiff



Report Number : 43407

Date : 4/26/2005

Project Name : 318 S. Livermore Ave., Livermore

Project Number : 050413-PC3

Sample : MW-5

Matrix : Water

Lab Number : 43407-01

Sample Date : 4/13/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/26/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/26/2005
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	4/26/2005
4-Bromofluorobenzene (Surr)	94.6		% Recovery	EPA 8260B	4/26/2005
Dibromofluoromethane (Surr)	103		% Recovery	EPA 8260B	4/26/2005
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	4/26/2005

Approved By:

Joe Kiff

Project Name : 318 S. Livermore Ave., Livermore

Project Number : 050413-PC3

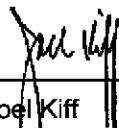
Sample : MW-6

Matrix : Water

Lab Number : 43407-02

Sample Date : 4/13/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/25/2005
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene - d8 (Surr)	89.8		% Recovery	EPA 8260B	4/25/2005
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	4/25/2005
Dibromofluoromethane (Surr)	104		% Recovery	EPA 8260B	4/25/2005
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	4/25/2005

Approved By: 
Joel Kiff



Report Number : 43407

Date : 4/26/2005

Project Name : 318 S. Livermore Ave., Livermore

Project Number : 050413-PC3


Sample : MW-7

Matrix : Water

Lab Number : 43407-03

Sample Date :4/13/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Methyl-t-butyl ether (MTBE)	0.87	0.50	ug/L	EPA 8260B	4/25/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/25/2005
1,2-Dichloroethane	1.2	0.50	ug/L	EPA 8260B	4/25/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene - d8 (Surr)	89.4		% Recovery	EPA 8260B	4/25/2005
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	4/25/2005
Dibromofluoromethane (Surr)	104		% Recovery	EPA 8260B	4/25/2005
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	4/25/2005

Approved By:  Joel Kiff

Project Name : 318 S. Livermore Ave., Livermore

Project Number : 050413-PC3


Sample : MW-8

Matrix : Water

Lab Number : 43407-04

Sample Date : 4/13/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/26/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/26/2005
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/26/2005
Toluene - d8 (Surr)	94.2		% Recovery	EPA 8260B	4/26/2005
4-Bromofluorobenzene (Surr)	98.1		% Recovery	EPA 8260B	4/26/2005
Dibromofluoromethane (Surr)	101		% Recovery	EPA 8260B	4/26/2005
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	4/26/2005

Approved By: 
Joel Kiff

Report Number : 43407

Date : 4/26/2005

QC Report : Method Blank DataProject Name : **318 S. Livermore Ave., Livermore**Project Number : **050413-PC3**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/25/2005
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene - d8 (Surr)	91.4		%	EPA 8260B	4/25/2005
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	4/25/2005
Dibromofluoromethane (Surr)	105		%	EPA 8260B	4/25/2005
1,2-Dichloroethane-d4 (Surr)	105		%	EPA 8260B	4/25/2005

Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	4/25/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/25/2005
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	4/25/2005
Toluene - d8 (Surr)	99.9		%	EPA 8260B	4/25/2005
4-Bromofluorobenzene (Surr)	97.4		%	EPA 8260B	4/25/2005
Dibromofluoromethane (Surr)	103		%	EPA 8260B	4/25/2005
1,2-Dichloroethane-d4 (Surr)	99.4		%	EPA 8260B	4/25/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd St. Suite 300 Davis, CA 95616 530-297-4800

Report Number : 43407


Date : 4/26/2005

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **318 S. Livermore Ave.,**

Project Number : **050413-PC3**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	43388-02	75	40.0	40.0	120	116	ug/L	EPA 8260B	4/25/05	112	102	9.86	70-130	25
Toluene	43388-02	1.6	40.0	40.0	40.4	39.6	ug/L	EPA 8260B	4/25/05	97.0	95.1	1.99	70-130	25
Tert-Butanol	43388-02	17	200	200	220	224	ug/L	EPA 8260B	4/25/05	101	103	1.94	70-130	25
Methyl-t-Butyl Ether	43388-02	11	40.0	40.0	49.1	50.0	ug/L	EPA 8260B	4/25/05	94.3	96.5	2.33	70-130	25
Benzene	43386-05	<0.50	40.0	40.0	41.9	40.4	ug/L	EPA 8260B	4/25/05	105	101	3.70	70-130	25
Toluene	43386-05	0.70	40.0	40.0	43.0	41.7	ug/L	EPA 8260B	4/25/05	106	102	3.31	70-130	25
Tert-Butanol	43386-05	<5.0	200	200	208	206	ug/L	EPA 8260B	4/25/05	104	103	0.972	70-130	25
Methyl-t-Butyl Ether	43386-05	<0.50	40.0	40.0	42.7	41.9	ug/L	EPA 8260B	4/25/05	107	105	1.82	70-130	25

Approved By:  _____
 Joe Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Report Number : 43407

Date : 4/26/2005

QC Report : Laboratory Control Sample (LCS)

Project Name : 318 S. Livermore Ave.,

Project Number : 050413-PC3

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	4/25/05	109	70-130
Toluene	40.0	ug/L	EPA 8260B	4/25/05	102	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/25/05	109	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/25/05	85.4	70-130
Benzene	40.0	ug/L	EPA 8260B	4/25/05	99.4	70-130
Toluene	40.0	ug/L	EPA 8260B	4/25/05	104	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/25/05	103	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/25/05	104	70-130

KIFF ANALYTICAL, LLC

Approved By:

Joe Kiff

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced:

- SCIENCE & ENGINEERING
- TECHNICAL SERVICES
- CRMT HOUSTON

Denis Brown

2005-04-0491

INCIDENT NUMBER (S&E ONLY)

9 7 4 6 4 7 0 9

SAP or CRMT NUMBER (TS/CRMT)

DATE: 4/13/05

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services		LOG CODE: BTSS	SITE ADDRESS (Street and City): 318 S. Livermore Ave., Livermore		GLOBAL ID NO.: T0600101249
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112			EDF DELIVERABLE TO (Responsible Party or Designer): Vera Fischer	PHONE NO.: (408) 224-4724	E-MAIL: vfischer@deltaenv.com
PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart			SAMPLER NAME(S) (Print): P Cornish		CONSULTANT PROJECT NO.: 050413-023
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: lgearhart@blainetech.com	LAB USE ONLY		

TURNAROUND TIME (BUSINESS DAYS):
 10 DAYS 5 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS

LA - RWQCB REPORT FORMAT UST AGENCY:

GC/MS MTBE CONFIRMATION: HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	1,2-DCA, EDB	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes 4°C
		DATE	TIME									
	MW-5	4/13/05	1520	W	3	X	X					-01
	MW-6		1620		3	X	X					-02
	MW-7		1645		3	X	X					-03
	MW-8		1552		3	X	X					-04

SAMPLES ARRIVED ON WET ICE AT 1600 VIA STL COURIER. TEMPERATURE WAS 4.3°C UP IR-1. REF 042505 1645

Relinquished by: (Signature) <i>P. Cornish</i>	Received by: (Signature) <i>[Signature]</i>	Date: 4/14/05	Time: 1737
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 04/14/05	Time: 1723
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>Robert Peckle KIFF ANALYTICAL</i>	Date: 042505	Time: 1645

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

Q&G Graphic (714) 898-9702

WELLHEAD INSPECTION CHECKLIST

Client Shell Date 4/13/05

Site Address 31B S. Livermore Ave., Livermore

Job Number 050413-R3 Technician D. Cornish

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-5	A		A					
MW-6	A		A					
MW-7	A		A					
MW-8	A		A					

NOTES:

WELL GAUGING DATA

Project # 050413-PC3 Date 4/13/05 Client Shell

Site 310 S. Livermore Ave., Livermore

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOB
MW-5	2					22.58	59.18	TOC
MW-6	2					23.05	53.50	↓
MW-7	2					23.25	51.19	
MW-8	2					22.81	51.16	

SHELL WELL MONITORING DATA SHEET

BTS #: <u>050413-PC3</u>	Site: <u>97464709</u>
Sampler: <u>PC</u>	Date: <u>4/13/05</u>
Well I.D.: <u>MU-S</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth (TD): <u>55.18</u>	Depth to Water (DTW): <u>22.58</u>
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVT</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>29.10</u>	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible

 Waterra Peristaltic Extraction Pump Other _____

 Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____

$\frac{5.2 \text{ (Gals.)} \times 3 \text{ Specified Volumes}}{1 \text{ Case Volume}} = 15.6 \text{ Gals. Calculated Volume}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1500</u>	<u>63.8</u>	<u>7.4</u>	<u>1002</u>	<u>21000</u>	<u>5.2</u>	
<u>1508</u>	<u>63.4</u>	<u>7.3</u>	<u>994</u>	<u>21000</u>	<u>10.4</u>	
<u>1515</u>	<u>65.1</u>	<u>7.3</u>	<u>990</u>	<u>365</u>	<u>15.6</u>	

Did well dewater? Yes No Gallons actually evacuated: 15.6

Sampling Date: 4/13/05 Sampling Time: 1520 Depth to Water: 22.58

Sample I.D.: MU-S Laboratory: STD Other: _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See LOC

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 05041303	Site: 9746 4709
Sampler: PC	Date: 4/13/08
Well I.D.: MW-6	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8 _____
Total Well Depth (TD): 53.50	Depth to Water (DTW): 23.05
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> Grade	D.O. Meter (if req'd): <input type="radio"/> YSI <input type="radio"/> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 29.14	

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Positive Air Displacement <input type="checkbox"/> Electric Submersible	Waterra <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
---	--	--

49 (Gals.) X	4	= 14.7 Gals.
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1602	65.0	7.3	919	592	4.9	cloudy ↓
1610	64.5	7.3	898	327	9.8	
1616	64.4	7.3	898	398	14.7	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: 14.7	
Sampling Date: 4/13/08	Sampling Time: 1620	Depth to Water: 25.91
Sample I.D.: MW-6	Laboratory: <input checked="" type="checkbox"/> DT	Other: _____
Analyzed for: <input checked="" type="checkbox"/> TPH-G <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> TPH-D	Other: secoc	
EB I.D. (if applicable): _____ @ _____ Time	Duplicate I.D. (if applicable):	
Analyzed for: <input type="checkbox"/> TPH-G <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> TPH-D	Other: _____	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV	

SHELL WELL MONITORING DATA SHEET

BTS #: <u>050413-A2</u>	Site: <u>07464709</u>
Sampler: <u>PC</u>	Date: <u>4/13/05</u>
Well I.D.: <u>MW-7</u>	Well Diameter: <u>②</u> 3 4 6 8
Total Well Depth (TD): <u>51.19</u>	Depth to Water (DTW): <u>23.25</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>2084</u>	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other: _____ Dedicated Tubing

$\frac{4.5 \text{ (Gals.)} \times 3 \text{ Specified Volumes}}{1 \text{ Case Volume}} = 13.5 \text{ Gals. Calculated Volume}$	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1628	64.1	6.9	1189	71000	4.5	
1634	64.1	7.0	1234	71000	9.0	
1640		MESSED	READINGS		13.5	

Did well dewater? Yes NO Gallons actually evacuated: 13.5

Sampling Date: 4/13/05 Sampling Time: 1645 Depth to Water: 27.02

Sample I.D.: MW-7 Laboratory: STD Other: _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see LOC

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd): Pre-purge:		mg/L	Post-purge:		mg/L
O.R.P. (if req'd): Pre-purge:		mV	Post-purge:		mV

SHELL WELL MONITORING DATA SHEET

BTS #: 050413-PC3	Site: 97464709
Sampler: PC	Date: 4/13/05
Well I.D.: MW-8	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8 _____
Total Well Depth (TD): 51.16	Depth to Water (DTW): 22.81
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVC <input type="radio"/> Grade	D.O. Meter (if req'd): <input type="radio"/> YSI <input type="radio"/> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 28.48	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other: _____

$4.5 \text{ (Gals.)} \times 3 = 13.5 \text{ Gals.}$ 1 Case Volume Specified Volumes Calculated Volume	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius² * 0.163</td> </tr> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius ² * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius ² * 0.163														

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1530	64.7	7.3	980	71000	4.5	
1537	65.9	7.3	977	71000 483	9	
1545	66.5	7.3	979	MS600 READING	13.5	

Did well dewater? Yes Gallons actually evacuated: 13.5

Sampling Date: 4/13/05 Sampling Time: 1552 Depth to Water: 26.51

Sample I.D.: MW-8 Laboratory: DTI Other: _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see box

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV