RO-213 2/6/02 Continue to analyze GW from MW-2, MW-3 and MW-4 for ether oxygenates - emailed to B Jakub + K Petryna

RO-

CAMBRIA

January 28, 2002

eva chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Fourth Quarter 2001 Monitoring Report**
Shell-branded Service Station
11989 Dublin Boulevard
Dublin, California
Incident #98995328
Cambria Project #244-0548-002

JAN 30 2002

Dear Ms. chu:

On behalf of Equiva Services LLC, Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

FOURTH QUARTER 2001 ACTIVITIES

Groundwater Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled the site wells, calculated groundwater elevations, and compiled the analytical data. Cambria prepared a vicinity/area well survey map and a groundwater elevation contour map with a rose diagram showing groundwater gradient (Figures 1 and 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

Additional Oxygenate Analysis: In addition to the regular quarterly analysis for total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, xylenes, and methyl tert butyl ether (MTBE), groundwater samples from monitoring wells MW-2 and MW-3 were analyzed for four extra oxygenates and ethanol. Analytical results for MTBE, di-isopropyl ether, ethyl tert-butyl ether, tert-amyl methyl ether, tert-butyl alcohol, and ethanol are summarized in Table 1.

ANTICIPATED FIRST QUARTER 2002 ACTIVITIES

Groundwater Monitoring: Blaine will gauge and sample all wells and tabulate the data. Cambria will prepare a monitoring report.

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

Dissolved Oxygen Monitoring: Dissolved oxygen monitoring will be discontinued at this site.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Barbara Jakub at (510) 420-3309 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Stephan Bork

for: Barbara J. Jakub, R.G.
Project Geologist

Diane M. Lundquist, P.E.
Principal Engineer

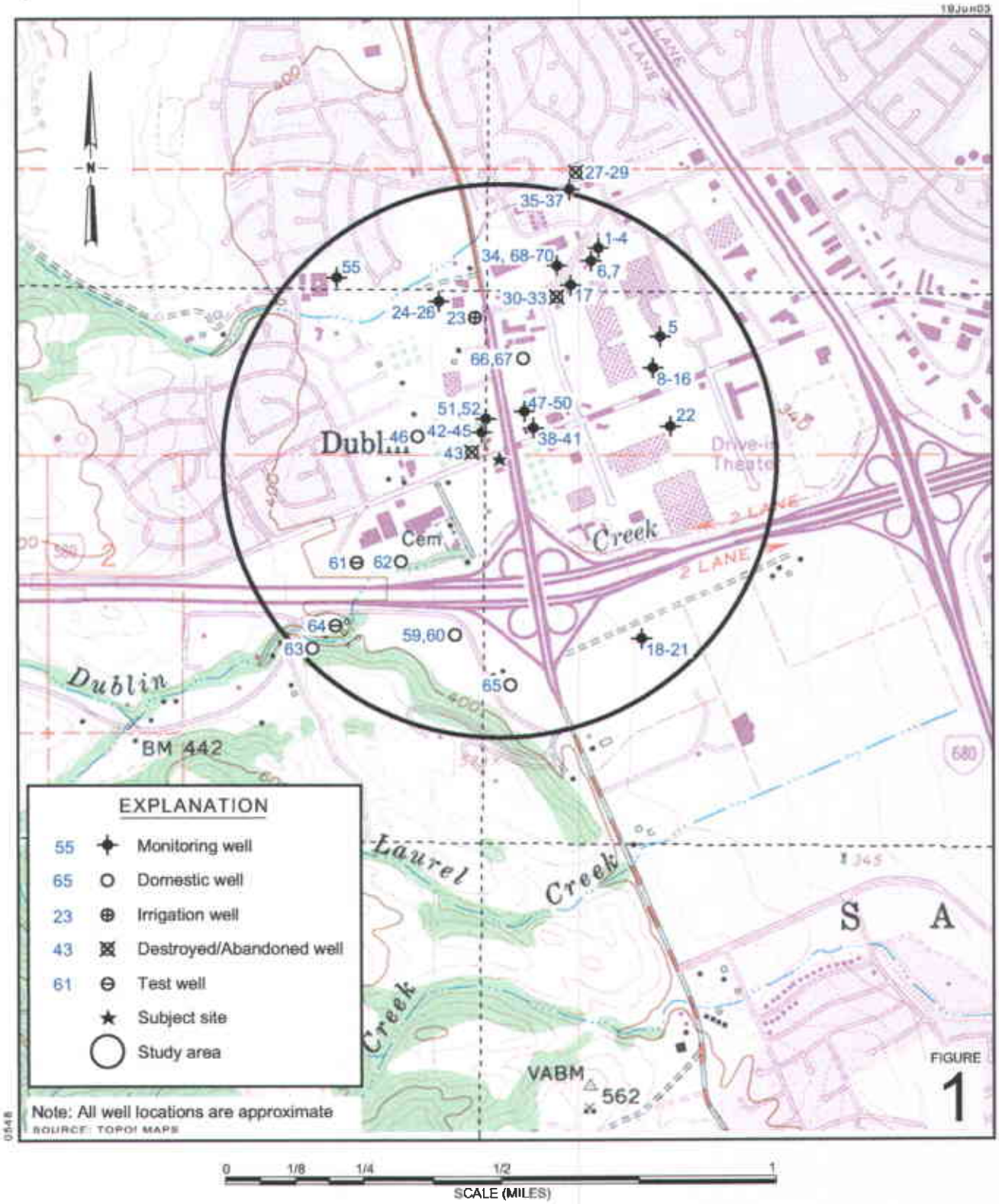
Figures: 1 - Vicinity/Area Well Survey Map
2 - Groundwater Elevation Contour Map

Table: 1 - Groundwater Analytical Data - Oxygenates

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869

g:\dublin 11989dublin\qm\4q01qm.doc



Shell-branded Service Station
11989 Dublin Boulevard
Dublin, California

CAMBRIA

Vicinity/Area Well Survey Map
(1/2 Mile Radius)

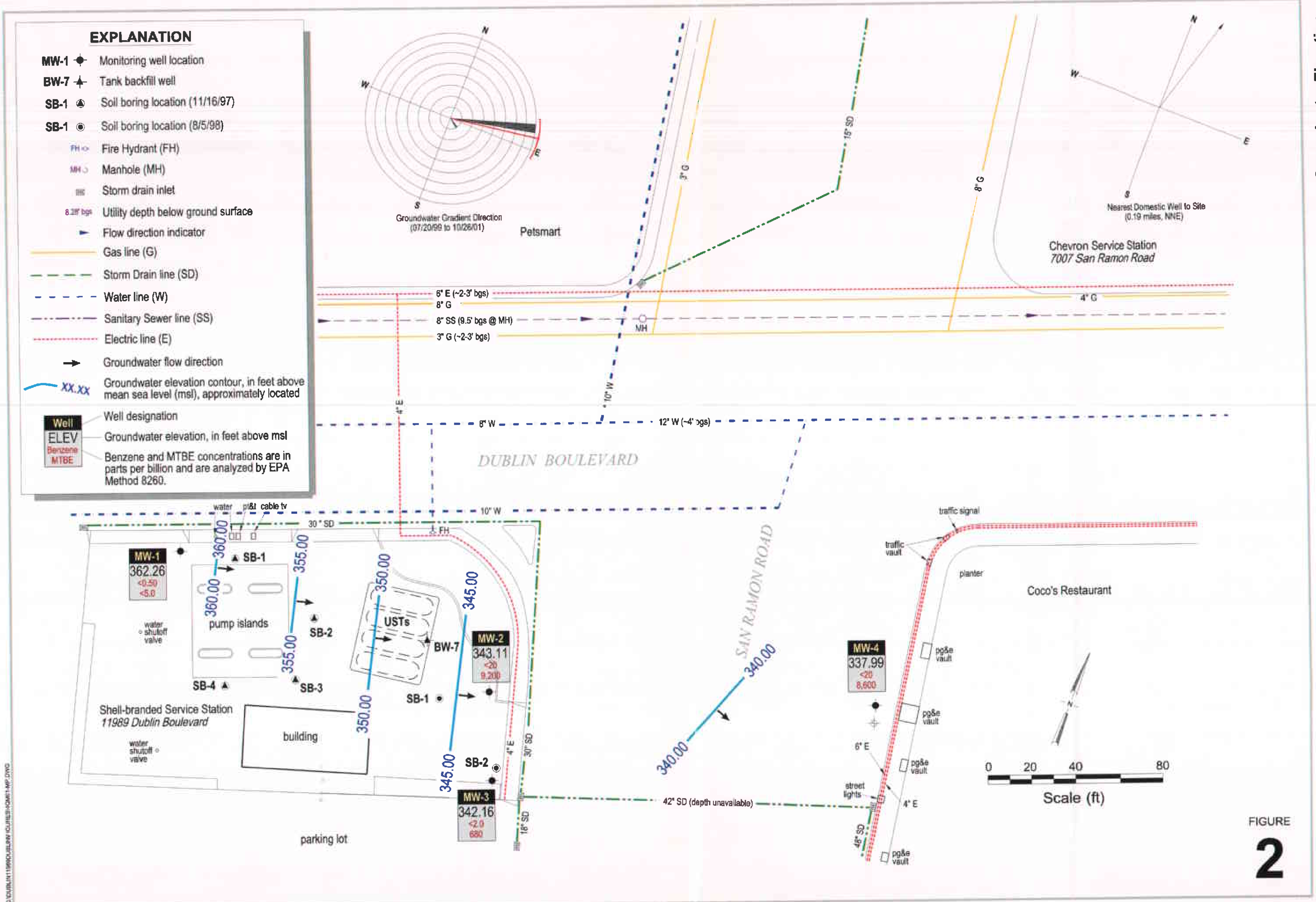

EXPLANATION
MW-1 Monitoring well location
BW-7 Tank backfill well
SB-1 Soil boring location (11/16/97)
SB-1 Soil boring location (8/5/98)
FH Fire Hydrant (FH)
MH Manhole (MH)
Storm drain inlet
8.28' bgs Utility depth below ground surface
Flow direction indicator
Gas line (G)
Storm Drain line (SD)
Water line (W)
Sanitary Sewer line (SS)
Electric line (E)
Groundwater flow direction
XX.XX Groundwater elevation contour, in feet above mean sea level (msl), approximately located
Well
ELEV
Benzene
MTBE
Well designation
Groundwater elevation, in feet above msl
Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.
Groundwater Gradient Direction (07/20/99 to 10/26/01)
Petsmart
Nearest Domestic Well to Site (0.19 miles, NNE)
Chevron Service Station
7007 San Ramon Road
6" E (~2-3' bgs)
8" G
8" SS (9.5' bgs @ MH)
3" G (~2-3' bgs)
MH
4" G
15" SD
3" G
8" G
10" W
4" E
8" W
12" W (~4' bgs)
DUBLIN BOULEVARD
SAN RAMON ROAD
water
pt&t
cable tv
10" W
30" SD
FH
MW-1
362.26
<0.50
<5.0
SB-1
360.00
355.00
350.00
345.00
pump islands
water shutoff valve
SB-2
USTs
BW-7
MW-2
343.11
<20
9,200
SB-4
SB-3
SB-1
Shell-branded Service Station
11989 Dublin Boulevard
building
water shutoff valve
SB-2
4" E
30" SD
MW-3
342.16
<2.0
680
18" SD
parking lot
42" SD (depth unavailable)
340.00
traffic signal
traffic vault
planter
Coco's Restaurant
MW-4
337.99
<20
8,600
pg&e vault
6" E
street lights
4" E
48" SD
0 20 40 80
Scale (ft)

FIGURE
2

Groundwater Elevation Contour Map

October 26, 2001

C A M B R I A

Shell-branded Service Station
11989 Dublin Boulevard
Dublin, California
Incident #98995328

Table 1. **Groundwater Analytical Data - Oxygenates** - Shell-branded Service Station, Incident #98995328, 11989 Dublin Boulevard, Dublin, California

Sample ID	Date Sampled	MTBE	DIPE	ETBE	TAME	TBA	Ethanol
		← (Concentrations in ppb) →					
MW-2	10/26/01	9,200	<20	<20	<20	1,800	<500
MW-3	10/26/01	680	<2.0	<2.0	<2.0	79	<500

Abbreviations:

MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260
DIPE = Di-isopropyl ether, analyzed by EPA Method 8260
ETBE = Ethyl tert-butyl ether, analyzed by EPA Method 8260
TAME = Tert-amyl methyl ether, analyzed by EPA Method 8260
TBA = Tert-butyl alcohol, analyzed by EPA Method 8260
Ethanol analyzed by EPA Method 8260
ppb = Parts per billion

ATTACHMENT A

Blaine Groundwater Monitoring Report and Field Notes

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
(408) 573-7771 FAX
(408) 573-0555 PHONE
CONTRACTOR'S LICENSE #746684
www.blainetech.com

November 16, 2001

Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Fourth Quarter 2001 Groundwater Monitoring at
Shell-branded Service Station
11989 Dublin Boulevard
Dublin, CA

Monitoring performed on August 10, 13 and
October 26, 2001

Groundwater Monitoring Report **011026-M-1**

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,

for

Nick Sudano
Project Coordinator

NS/jt

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

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th Street
Oakland, CA 94608-2411

WELL CONCENTRATIONS
Shell-branded Service Station
11989 Dublin Boulevard
Dublin, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	D.O. Reading (ppm)
MW-1	07/20/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	367.99	6.24	361.75	NA
MW-1	10/25/1999	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	367.99	6.36	361.63	NA
MW-1	01/27/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	367.99	5.65	362.34	NA
MW-1	04/03/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	367.99	5.68	362.31	1.2/1.6
MW-1	07/27/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	367.99	5.69	362.30	1.0/1.1
MW-1	10/16/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	367.99	5.74	362.25	1.2/0.8
MW-1	01/16/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	367.99	5.71	362.28	0.59/2.8
MW-1	04/19/2001	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	367.99	5.63	362.36	1.4/1.5
MW-1	07/13/2001	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	367.99	5.70	362.29	2.3/3.1
MW-1	**08/13/2001**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**367.99**	**5.72**	**362.27**	**NA**
MW-1	**10/26/2001**	**<50**	**NA**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**NA**	**<5.0**	**367.99**	**5.73**	**362.26**	**0.4/0.0**
MW-2	07/20/1999	2,600	699	55.0	<2.50	59.5	<2.50	9,370	NA	365.43	20.31	345.12	NA
MW-2	10/25/1999	4,710	761	61.1	<10.0	74.6	<10.0	22,800	NA	365.43	22.80	342.63	NA
MW-2	01/27/2000	3,820	1490	60.8	<10.0	156	<10.0	13,400	15,000a	365.43	19.17	346.26	NA
MW-2	04/03/2000	7,130	NA	184	14.9	238	18.8	34,200	28,000	365.43	19.03	346.40	1.6/1.7
MW-2	07/27/2000	311	NA	10.0	<0.500	<0.500	<0.500	280	NA	365.43	19.09	346.34	1.9/1.7
MW-2	10/16/2000	3,970	NA	123	<5.00	68.5	<5.00	14,000	15,600	365.43	23.98	341.45	0.5/0.5
MW-2	01/16/2001	5,780	NA	125	9.71	139	6.93	7,660	7,810	365.43	22.12	343.31	0.90/2.61
MW-2	04/19/2001	4,460	NA	114	7.61	115	4.87	15,200	18,400	365.43	20.95	344.48	1.6/1.5
MW-2	07/13/2001	<5,000	NA	<25	<25	110	<25	NA	15,000	365.43	22.62	342.81	2.7/1.8
MW-2	**08/13/2001**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**365.43**	**22.33**	**343.10**	**NA**
MW-2	**10/26/2001**	**3,700**	**NA**	**<20**	**<20**	**66**	**<20**	**NA**	**9,200**	**365.43**	**22.32**	**343.11**	**0.7/0.8**
MW-3	07/20/1999	208	177	4.69	<0.500	<0.500	<0.500	664	NA	364.97	24.23	340.74	NA
MW-3	10/25/1999	378	182	9.49	<0.500	<0.500	<0.500	1,410	NA	364.97	23.26	341.71	NA
MW-3	01/27/2000	428	100	29.4	<0.500	<0.500	<0.500	941	NA	364.97	19.53	345.44	NA
MW-3	04/03/2000	<125	NA	11.4	<1.25	<1.25	<1.25	639	NA	364.97	19.13	345.84	1.4/1.9

WELL CONCENTRATIONS
Shell-branded Service Station
11989 Dublin Boulevard
Dublin, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	D.O. Reading (ppm)
MW-3	07/27/2000	4,360	NA	78.4	6.95	85.8	2.61	26,600	25,200b	364.97	19.10	345.87	1.9/2.0
MW-3	10/16/2000	586	NA	21.3	<0.500	<0.500	<0.500	3,310	NA	364.97	24.11	340.86	1.1/0.8
MW-3	01/16/2001	558	NA	14.7	<0.500	<0.500	<0.500	2,210	NA	364.97	22.19	342.78	0.87/3.5
MW-3	04/19/2001	376	NA	9.08	<0.500	<0.500	<0.500	667	NA	364.97	20.96	344.01	1.7/1.4
MW-3	07/13/2001	370	NA	<2.0	<2.0	<2.0	<2.0	NA	670	364.97	22.77	342.20	3.1/4.8
MW-3	**08/13/2001**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**364.97**	**22.59**	**342.38**	**NA**
MW-3	**10/26/2001**	**<200**	**NA**	**<2.0**	**<2.0**	**<2.0**	**<2.0**	**NA**	**680**	**364.97**	**22.81**	**342.16**	**1.0/3.2**
MW-4	**08/10/2001**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**364.01**	**25.63**	**338.38**	**NA**
MW-4	**08/13/2001**	**2,400**	**NA**	**<10**	**<10**	**<10**	**<10**	**NA**	**8,300**	**364.01**	**26.32**	**337.69**	**4.2/2.7**
MW-4	**10/26/2001**	**<2,000**	**NA**	**<20**	**<20**	**<20**	**<20**	**NA**	**8,600**	**364.01**	**26.02**	**337.99**	**3.1/2.8**

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to July 13, 2001, analyzed by EPA Method 8015.

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to July 13, 2001, analyzed by EPA Method 8020.

MTBE = methyl-tertiary-butyl ether by EPA Method 8020

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ug/L = parts per billion

ppm = parts per million

msl = Mean sea level

ft = Feet

<n = Below detection limit

n/n = Pre-purge/Post-purge DO Readings

NA = Not applicable

WELL CONCENTRATIONS
Shell-branded Service Station
11989 Dublin Boulevard
Dublin, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	D.O. Reading (ppm)

Notes:

Wells surveyed June 21, 1999 by Virgil Chavez Land Surveying of Vallejo, California.

Wells surveyed August 23, 2001 by Virgil Chavez Land Surveying of Vallejo, California.

a = Sample was analyzed outside the EPA recommended holding time.

b = Concentration is an estimate.

KIFF ANALYTICAL LLC

Report Number : 23083
Date : 11/12/2001

Nick Sudano
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 4 Water Samples
Project Name : 11989 Dublin Boulevard, Dublin
Project Number : 011026-M1
P.O. Number : 98995328

Dear Mr. Sudano,

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,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 23083
Date : 11/12/2001

Project Name : **11989 Dublin Boulevard, Dublin**
Project Number : **011026-M1**

Sample : **MW-1** Matrix : Water Lab Number : 23083-01
Sample Date :10/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	11/2/2001
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	11/2/2001
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	11/2/2001
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	11/2/2001
Methyl-t-butyl ether (MTBE)	**< 5.0**	5.0	ug/L	EPA 8260B	11/2/2001
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	11/2/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/2/2001
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8260B	11/2/2001

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 23083
Date : 11/12/2001

Project Name : **11989 Dublin Boulevard, Dublin**
Project Number : **011026-M1**

Sample : **MW-2** Matrix : Water Lab Number : 23083-02
Sample Date :10/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Toluene	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Ethylbenzene	**66**	20	ug/L	EPA 8260B	11/3/2001
Total Xylenes	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Methyl-t-butyl ether (MTBE)	**9200**	20	ug/L	EPA 8260B	11/3/2001
Diisopropyl ether (DIPE)	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Ethyl-t-butyl ether (ETBE)	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Tert-amyl methyl ether (TAME)	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Tert-Butanol	**1800**	200	ug/L	EPA 8260B	11/3/2001
Ethanol	**< 500**	500	ug/L	EPA 8260B	11/3/2001
TPH as Gasoline	**3700**	2000	ug/L	EPA 8260B	11/3/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	11/3/2001
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	11/3/2001

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 23083
Date : 11/12/2001

Project Name : **11989 Dublin Boulevard, Dublin**
Project Number : **011026-M1**

Sample : **MW-3** Matrix : Water Lab Number : 23083-03
Sample Date :10/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 2.0**	2.0	ug/L	EPA 8260B	11/3/2001
Toluene	**< 2.0**	2.0	ug/L	EPA 8260B	11/3/2001
Ethylbenzene	**< 2.0**	2.0	ug/L	EPA 8260B	11/3/2001
Total Xylenes	**< 2.0**	2.0	ug/L	EPA 8260B	11/3/2001
Methyl-t-butyl ether (MTBE)	**680**	2.0	ug/L	EPA 8260B	11/3/2001
Diisopropyl ether (DIPE)	**< 2.0**	2.0	ug/L	EPA 8260B	11/3/2001
Ethyl-t-butyl ether (ETBE)	**< 2.0**	2.0	ug/L	EPA 8260B	11/3/2001
Tert-amyl methyl ether (TAME)	**< 2.0**	2.0	ug/L	EPA 8260B	11/3/2001
Tert-Butanol	**79**	50	ug/L	EPA 8260B	11/3/2001
Ethanol	**< 500**	500	ug/L	EPA 8260B	11/3/2001
TPH as Gasoline	**< 200**	200	ug/L	EPA 8260B	11/3/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	11/3/2001
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	11/3/2001

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 23083
Date : 11/12/2001

Project Name : **11989 Dublin Boulevard, Dublin**
Project Number : **011026-M1**

Sample : **MW-4** Matrix : Water Lab Number : 23083-04
Sample Date :10/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Toluene	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Ethylbenzene	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Total Xylenes	**< 20**	20	ug/L	EPA 8260B	11/3/2001
Methyl-t-butyl ether (MTBE)	**8600**	200	ug/L	EPA 8260B	11/3/2001
TPH as Gasoline	**< 2000**	2000	ug/L	EPA 8260B	11/3/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	11/3/2001
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	11/3/2001

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 23083

Date : 11/12/2001

Project Name : **11989 Dublin Boulevard,**

Project Number : **011026-M1**

23083 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	11/1/2001
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	11/1/2001
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	11/1/2001
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	11/1/2001
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	11/1/2001
Diisopropyl ether (DIPE)	**< 2.0**	2.0	ug/L	EPA 8260B	11/1/2001
Ethyl-t-butyl ether (ETBE)	**< 2.0**	2.0	ug/L	EPA 8260B	11/1/2001
Tert-amyl methyl ether (TAME)	**< 2.0**	2.0	ug/L	EPA 8260B	11/1/2001
Tert-Butanol	**< 50**	50	ug/L	EPA 8260B	11/1/2001
Ethanol	**< 500**	500	ug/L	EPA 8260B	11/1/2001
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	11/1/2001
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	11/1/2001
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8260B	11/1/2001

Approved By: Joel Kiff

Report Number : 23083

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 11/12/2001

Project Name : **11989 Dublin Boulevard,**

Project Number : **011026-M1**

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
Spike Recovery Data														
Benzene	23083-01	<0.50	19.5	19.4	18.2	18.5	ug/L	EPA 8260B	11/1/2001	93.1	95.6	2.62	70-130	25
Toluene	23083-01	<0.50	19.5	19.4	18.3	18.5	ug/L	EPA 8260B	11/1/2001	93.5	95.6	2.17	70-130	25
Tert-Butanol	23083-01	<5.0	97.6	97.0	80.7	82.8	ug/L	EPA 8260B	11/1/2001	82.6	85.4	3.21	70-130	25
Methyl-t-Butyl Ether	23083-01	<0.50	19.5	19.4	21.2	21.0	ug/L	EPA 8260B	11/1/2001	108	108	0.161	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 23083

QC Report : Laboratory Control Sample (LCS)

Date : 11/12/2001

Project Name : **11989 Dublin Boulevard,**

Project Number : **011026-M1**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	11/1/2001	97.2	70-130
Toluene	40.0	ug/L	EPA 8260B	11/1/2001	97.6	70-130
Tert-Butanol	200	ug/L	EPA 8260B	11/1/2001	87.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	11/1/2001	108	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

LAB: KIFF

EQUIVA Services LLC Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Equiva Project Manager to be invoiced: 23083

Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

INCIDENT NUMBER (SAP ONLY): 98995328

SAP or CRMT NUMBER (TS/CRMT):

DATE: 10/26/01

PAGE: 1 of 1

SAMPLING COMPANY: Blaine Tech Services	LOG CODE: BTSS	SITE ADDRESS (Street and City): 11989 Dublin Boulevard, Dublin	GLOBAL ID NO.: T0600102083
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112		EDF DELIVERABLE TO (Responsible Party or Designee): Anni Kreml	PHONE NO.: 510-420-3335
PROJECT CONTACT (Hardcopy or PDF Report to): Nick Sudano		E-MAIL: akreml@cambria-env.com	CONSULTANT PROJECT NO.: BTS # 011026-M1
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: nsudano@blainetech.com	SAMPLER NAME(S) (Print): Matthew Miller

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: TEMPERATURE ON RECEIPT C°

LAB USE ONLY

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	MW-1	10/26	1355	W	3	X	X	X									01
	MW-2	↓	1437	W	3	X	X	X		X	X						02
	MW-3	↓	1417	W	3	X	X	X		X	X						03
	MW-4	↓	1335	W	3	X	X	X									04

Relinquished by: (Signature) Matthew Miller	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Frank Bauer KIFF	Date: 102401	Time: 1135

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10/16/00 Revision

KIFF ANALYTICAL LLC

Report Number : 21777
Date : 9/5/2001

Nick Sudano
Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject : 1 Water Sample
Project Name : 11989 Dublin Blvd., Dublin
Project Number : 010813-N5
P.O. Number : 98995328

Dear Mr. Sudano,

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,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 21777
Date : 9/5/2001

Project Name : **11989 Dublin Blvd., Dublin**
Project Number : **010813-N5**

Sample : **MW-4** Matrix : Water Lab Number : 21777-01
Sample Date :8/13/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 10**	10	ug/L	EPA 8260B	8/18/2001
Toluene	**< 10**	10	ug/L	EPA 8260B	8/18/2001
Ethylbenzene	**< 10**	10	ug/L	EPA 8260B	8/18/2001
Total Xylenes	**< 10**	10	ug/L	EPA 8260B	8/18/2001
Methyl-t-butyl ether (MTBE)	**8300**	20	ug/L	EPA 8260B	8/22/2001
Diisopropyl ether (DIPE)	**< 10**	10	ug/L	EPA 8260B	8/18/2001
Ethyl-t-butyl ether (ETBE)	**< 10**	10	ug/L	EPA 8260B	8/18/2001
Tert-amyl methyl ether (TAME)	**< 10**	10	ug/L	EPA 8260B	8/18/2001
Tert-Butanol	**2200**	100	ug/L	EPA 8260B	8/18/2001
TPH as Gasoline	**2400**	1000	ug/L	EPA 8260B	8/18/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	8/18/2001
4-Bromofluorobenzene (Surr)	99.3		% Recovery	EPA 8260B	8/18/2001

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 21777

Date : 9/5/2001

Project Name : **11989 Dublin Blvd., Dublin**

Project Number : **010813-N5**

21777 Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	8/22/2001
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	8/22/2001
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	8/22/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/22/2001
4-Bromofluorobenzene (Surr)	97.6		% Recovery	EPA 8260B	8/22/2001

Approved By: Joel Kiff

Report Number : 21777

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 9/5/2001

Project Name : **11989 Dublin Blvd., Dublin**

Project Number : **010813-N5**

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
Spike Recovery Data														
Benzene	21755-12	630	19.8	19.0	474	468	ug/L	EPA 8260B	8/18/2001	0.00	0.00	0.00	70-130	25
Toluene	21755-12	20	19.8	19.0	36.9	36.5	ug/L	EPA 8260B	8/18/2001	87.8	89.2	1.67	70-130	25
Tert-Butanol	21755-12	79	99.2	95.0	189	179	ug/L	EPA 8260B	8/18/2001	112	106	5.44	70-130	25
Methyl-t-Butyl Ether	21755-12	18	19.8	19.0	33.8	34.4	ug/L	EPA 8260B	8/18/2001	80.4	87.4	8.35	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 21777

QC Report : Laboratory Control Sample (LCS)

Date : 9/5/2001

Project Name : **11989 Dublin Blvd., Dublin**

Project Number : **010813-N5**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	19.2	ug/L	EPA 8260B	8/18/2001	91.8	70-130
Toluene	19.2	ug/L	EPA 8260B	8/18/2001	99.3	70-130
Tert-Butanol	96.2	ug/L	EPA 8260B	8/18/2001	95.6	70-130
Methyl-t-Butyl Ether	19.2	ug/L	EPA 8260B	8/18/2001	92.6	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

LAB: Kiff

Lab Identification (if necessary):

Address:

City, State, Zip:

EQUIVA Services LLC Chain Of Custody Record 21777

Equiva Project Manager to be invoiced:

- [x] SCIENCE & ENGINEERING
- [ ] TECHNICAL SERVICES
- [ ] CRMT HOUSTON

Karen Petryna

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 3 2 8

SAP or CRMT NUMBER (TS/CRMT): [redacted]

DATE: 8/13/01

PAGE: 1 of 1

CONSULTANT COMPANY: Blaine Tech Services	SITE ADDRESS (Street and City): 11989 Dublin Blvd., Dublin
ADDRESS: 1680 Rogers Avenue	PROJECT CONTACT (Report to): Nick Sudano
CITY: San Jose, CA 95112	CONSULTANT PROJECT NO.: BTS # 010813-N5
TELEPHONE: 408-573-0555 FAX: 408-573-7771 E-MAIL: nsudano@blainetech.com	SAMPLER NAME(S) (Print): Michael Ninokata
	LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS): [x] 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: TEMPERATURE ON RECEIPT C°

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH-Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5 ppbRL)	Oxygenates (5) by (8260)	Ethanol (8260B)	Methanol	1,2-DCA	EDB (8260B)		TPH-Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See note							FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	MW-4	8/13/01	1451	GW	3	X	X	X																	-01

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]			
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	John [signature] / Kiff Analytical	081401	1219

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10/16/00 Revision

Q&O Graphic (714) 898-9702

LAB: Kiff

EQUIVA Services LLC Chain Of Custody Record 21777

Lab Identification (if necessary):

Address:

City, State, Zip:

Equiva Project Manager to be invoiced: Karen Petryna

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT HOUSTON

INCIDENT NUMBER (SAP) (USE ONLY): 9 8 9 9 5 3 2 8

SAP or CRMT NUMBER (TS/CRMT):

DATE: 8/13/01

PAGE: 1 of 1

CONSULTANT COMPANY: Blaine Tech Services

ADDRESS: 1680 Rogers Avenue

CITY: San Jose, CA 95112

TELEPHONE: 408-573-0555 FAX: 408-573-7771 E-MAIL: nsedano@blainetech.com

SITE ADDRESS (Street and City): 11989 Dublin Blvd., Dublin

PROJECT CONTACT (Reports): Nick Sedano

CONSULTANT PROJECT NO.: BTS # 010813-N5

SAMPLER NAME(S) (Print): Michael Nienbaker

LAB USE ONLY

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

☐ LA - INVOICE REPORT FORMAT ☐ LIST AGENCY:

GENASYSTRE CONFIRMATION HIGHEST _____ HIGHEST per BORING _____ ALL _____

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT C°

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH- Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5 ppb RL)	Oxygenates (5) by (8260)	Ethanol (8260B)	Methanol	1,2-DCA	EDB (8260B)	TPH-Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See note								FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	MW-4	8/13/01	1457	GW	3	X	X	X		X														-01

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

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10/15/99 Revision

AUG. -14' 01 (TUE) 16:23 BLAINE TECH SERVICES, INC TEL: 408 573 7771 P. 002

WELL GAUGING DATA

Project # 011026-m1 Date 10/26/01 Client Equiva

Site 11989 Dublin Blvd Dublin CA

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 TOC	DO PRE / POST
MW-1	4					5.73	19.78		0.4 / 0.0
MW-2	4					22.32	32.53		0.7 / 0.8
MW-3	4					22.81	32.65		1.0 / 3.2
MW-4	2					26.02	35.20		3.1 / 2.9

EQUIVA WELL MONITORING DATA SHEET

Project #: 011026-M1	Job # 11989 Dublin Rd Dublin CA
Sampler: MJM	Date: 10/26/01
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 19.78	Depth to Water: 6.73
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: Bailer / Middleburg / (Electric Submersible) / Extraction Pump / Other: ___

Sampling Method: (Bailer) / Extraction Port / Other: ___

9	x	3	=	27 Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1348	76.1	6.4	1089	202	9	cloudy
1349	74.4	6.4	1097	>202	18	"
1350	73.9	6.4	1106	>200	27	"

Did well dewater? Yes (No) Gallons actually evacuated: 27

Sampling Time: 1355 Sampling Date: 10/26/01

Sample I.D.: MW-1 Laboratory: Sequoia BC Other KIFF

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

D.O. (if req'd):	(Pre-purge):	0.4 mg/L	(Post-purge):	0.0 JV mg/L	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV	

EQUIVA WELL MONITORING DATA SHEET

Project #: 011026-M1	Job # 11989 Dublin Rd Dublin CA
Sampler: MJM	Date: 10/26/01
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 32.53	Depth to Water: 22.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: Bailer / Middleburg / (Electric Submersible) / Extraction Pump / Other: ___

Sampling Method: (Bailer) / Extraction Port / Other: ___

6.5 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 19.5 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1430	70.0	6.32	1021	>200	6.5	cloudy odor
1431	69.3	6.31	1022	>200	13	"
1432	69.0	6.32	1020	>200	19.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 19.5

Sampling Time: 1437 Sampling Date: 10/26/01

Sample I.D.: MW-2 Laboratory: Sequoia BC Other KIFF

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other: Ethanol Oxygenates

D.O. (if req'd):	(Pre-purge:)	0.7 mg/L	(Post-purge:)	0.8 mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

EQUIVA WELL MONITORING DATA SHEET

Project #: 011026-M1	Job # 11989 Dublin Rd Dublin CA
Sampler: MJM	Date: 10/26/01
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 32.65	Depth to Water: 22.81
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: Bailer / Middleburg / (Electric Submersible) / Extraction Pump / Other: ___

Sampling Method: (Bailer) / Extraction Port / Other: ___

6.5 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 19.5 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1410	70.5	6.42	1148	>20 ~~6.5~~	~~6.5~~ 6.5	cloudy / odor
1411	69.6	6.33	1159	>20 ~~13~~	~~13~~ 13	"
1412	68.9	6.34	1165	>20 ~~19.5~~	19.5	"

Did well dewater? Yes (No) Gallons actually evacuated: 19.5

Sampling Time: 1417 Sampling Date: 10/26/01

Sample I.D.: MW-3 Laboratory: Sequoia BC Other KIFF

Analyzed for: (TPH-G) BTEX MTBE TPH-D Other: Ethanol Oxygenates

D.O. (if req'd):	(Pre-purge):	1.0 mg/L	(Post-purge):	3.2 mg/L	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV	

EQUIVA WELL MONITORING DATA SHEET

Project #: 011026-M1	Job # 11989 Dublin Rd Dublin CA
Sampler: MJM	Date: 10/26/01
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 35.20	Depth to Water: 26.02
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: (Bailer) Middleburg ~~Electric Submersible~~ MJM Extraction Pump Other: ___

Sampling Method: (Bailer) Extraction Port Other: ___

1.5 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 4.5 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1322	70.7	7.47	1106	>200	1.5	brown
1325	69.9	7.45	1263	>200	3	"
1328	69.8	7.52	1294	>200	4.5	" silty

Did well dewater? Yes (No)		Gallons actually evacuated: 4.5	
Sampling Time: ~~1345~~ MJM 1335		Sampling Date: 10/26/01	
Sample I.D.: MW-4		Laboratory: Sequoia BC Other KIFF	
Analyzed for: (TPH-G BTEX MTBE) TPH-D	Other:		
D.O. (if req'd): (Pre-purge:)	3.1 √ mg/L	(Post-purge:)	2.8 √ mg/L
O.R.P. (if req'd): Pre-purge:	mV	Post-purge:	mV

WELL GAUGING DATA

Project # 010813-M4 Date 8/17/01 Client Equiva

Site 11989 Dublin Blvd. 98995328

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 TOC	
MW-1	4					5.72	19.78		
MW-2	4					22.33	32.53		
MW-3	4					22.59	32.65		
MW-4	2					26.32	35.11		

EQUIVA WELL MONITORING DATA SHEET

Project #: 010813-H4	Job # 98995328
Sampler: Mike M	Date: 8/13/01
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 35.11	Depth to Water: 26.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: (Bailer) Middleburg Electric Submersible Extraction Pump Other: ___

Sampling Method: (Bailer) Extraction Port Other: ___

1.5 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 4.5 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1441	67.7	7.1	1295	>200	1.5	brown, silty
1443	67.5	7.1	1572	>200	3.0	
1446	67.2	7.1	1439	>200	4.5	

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Time: 1451 Sampling Date: 8/13/01

Sample I.D.: MW-4 Laboratory: Sequoia BC Other: Kiff

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

D.O. (if req'd):	Pre-purge:	4.2 mg/L	Post-purge:	2.7 mg/L	
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV	

WELL GAUGING DATA

Project # 010810-C1 Date 8-10-01 Client Equiva

Site 11989 Dublin Blvd. - Dublin

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 TOC	
MW-4	2					25.63	35.20	TOC	

WELL DEVELOPMENT DATA SHEET

Project #: 010810-C1	Client: Equiva
Developer: Hanks	Date Developed: 8-10-01
Well I.D. MW-4	Well Diameter: (circle one) (2) 3 4 6
Total Well Depth: 35.20	Depth to Water: 25.63
Before After 35.24	Before 25.63 After 29.32
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
$\{12 \times (d^2/4) \times \pi\} / 231$
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

1.5	x	10	=	15
1 Case Volume		Specified Volumes		gallons

Purging Device: Bailer ☐ Electric Submersible ☐
Middleburg ☒ Suction Pump ☐

Type of Installed Pump _____
Other equipment used _____

TIME	TEMP (F)	pH	COND.	TURBIDITY	VOLUME REMOVED:	NOTATIONS:
0755	Swabbed well for 10 min.					
0815	Started Purge					
824	68.1	6.3	2134	>200	1.5	Very Silty
827	67.5	6.5	2043	>200	3	
829	67.2	6.6	2061	>200	4.5	
832	66.5	6.7	2042	>200	6	Still Silty
835	66.0	6.7	2030	>200	7.5	Hard Bottom
838	64.8	6.9	2016	>200	9	
841	65.2	6.8	2109	>200	10.5	Silty (turbid)
844	64.9	6.8	2102	>200	12	
847	64.6	6.9	2064	>200	135	Hard Bottom
851	64.7	6.9	2072	>200	15	Still Silty

Did Well Dewater? NO If yes, note above. Gallons Actually Evacuated: