

20-213

C A M B R I A

September 27, 2002

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

Re: **Third Quarter 2002 Monitoring Report**
Shell-branded Service Station
11989 Dublin Boulevard
Dublin, California
Incident #98995328
Cambria Project #244-0548-002

Alameda County
OCT 03 2002
Environmental Health



Dear Ms. chu:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US, Cambria Environmental Technology, Inc. (Cambria) is submitting this groundwater monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

THIRD QUARTER 2002 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 map which includes previously submitted well survey information (Figure 1) and a groundwater elevation contour map with a rose diagram showing groundwater gradient (Figure 2). Blaine's report, presenting the laboratory report and supporting field documents, is included as Attachment A.

As requested in a February 6, 2002 correspondence from the Alameda County Health Care Services Agency (ACHCSA), wells MW-2, MW-3, and MW-4 were additionally analyzed for diisopropyl ether, ethyl tertiary butyl ether, tertiary amyl methyl ether, tertiary butyl alcohol and ethanol. Results are summarized on Table 1.

Subsurface Investigation: On June 5, 2002, Cambria submitted a *Well Installation Work Plan* for downgradient well installation at the site. In a June 24, 2002 correspondence, eva chu of the ACHCSA requested a change to the scope of work described. Cambria submitted a *Subsurface Investigation Work Plan Addendum* on July 29, 2002 which was approved in an August 30 letter from the ACHCSA.

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

ANTICIPATED FOURTH QUARTER 2002 ACTIVITIES

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

Subsurface Investigation: Cambria is currently attempting to obtain a right-of-entry agreement for the subsurface investigation described in our July 29, 2002 *Investigation Work Plan Addendum*.



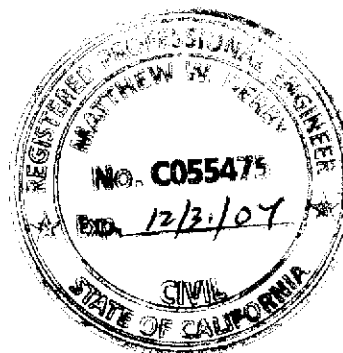
CLOSING

We appreciate the opportunity to work with you on this project. Please call Jacquelyn Jones at (510) 420-3316 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc

Jacquelyn L. Jones
Project Geologist

Matthew W. Derby, P.E.
Senior Project Engineer



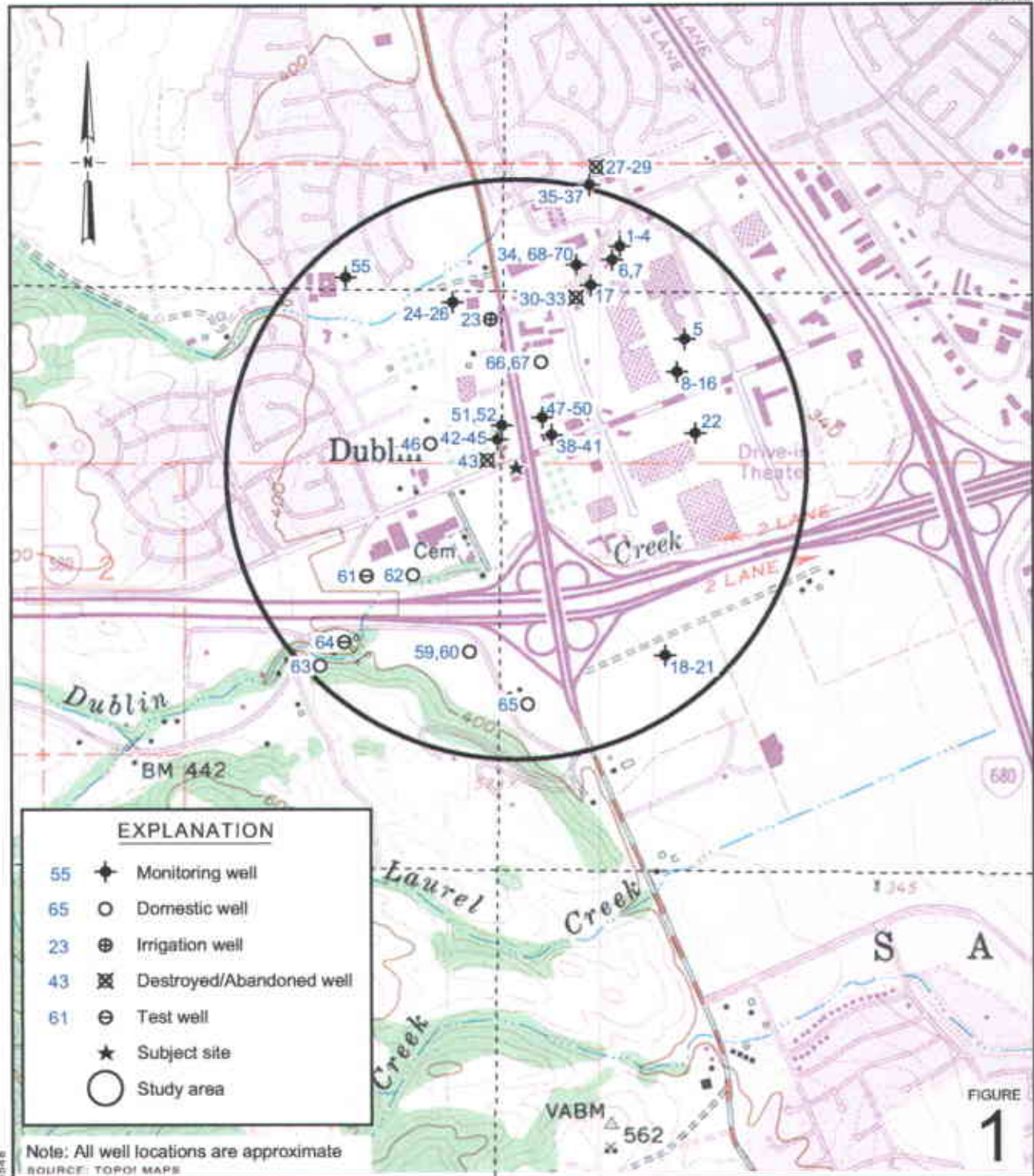
Figures: 1 - Vicinity/Area Well Survey Map
2 - Groundwater Elevation Contour Map

Table: 1 - Groundwater Analytical Data - Oxygenates

Attachment: A - Blaine Groundwater Monitoring Report and Field Notes

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, California 91510-7869

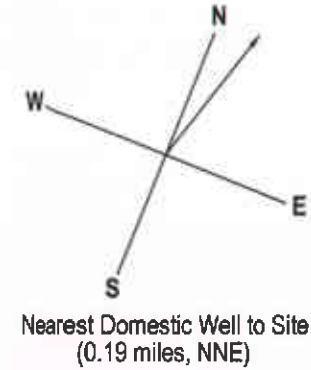
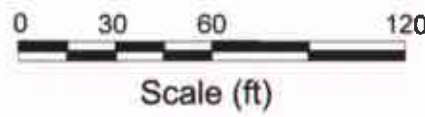
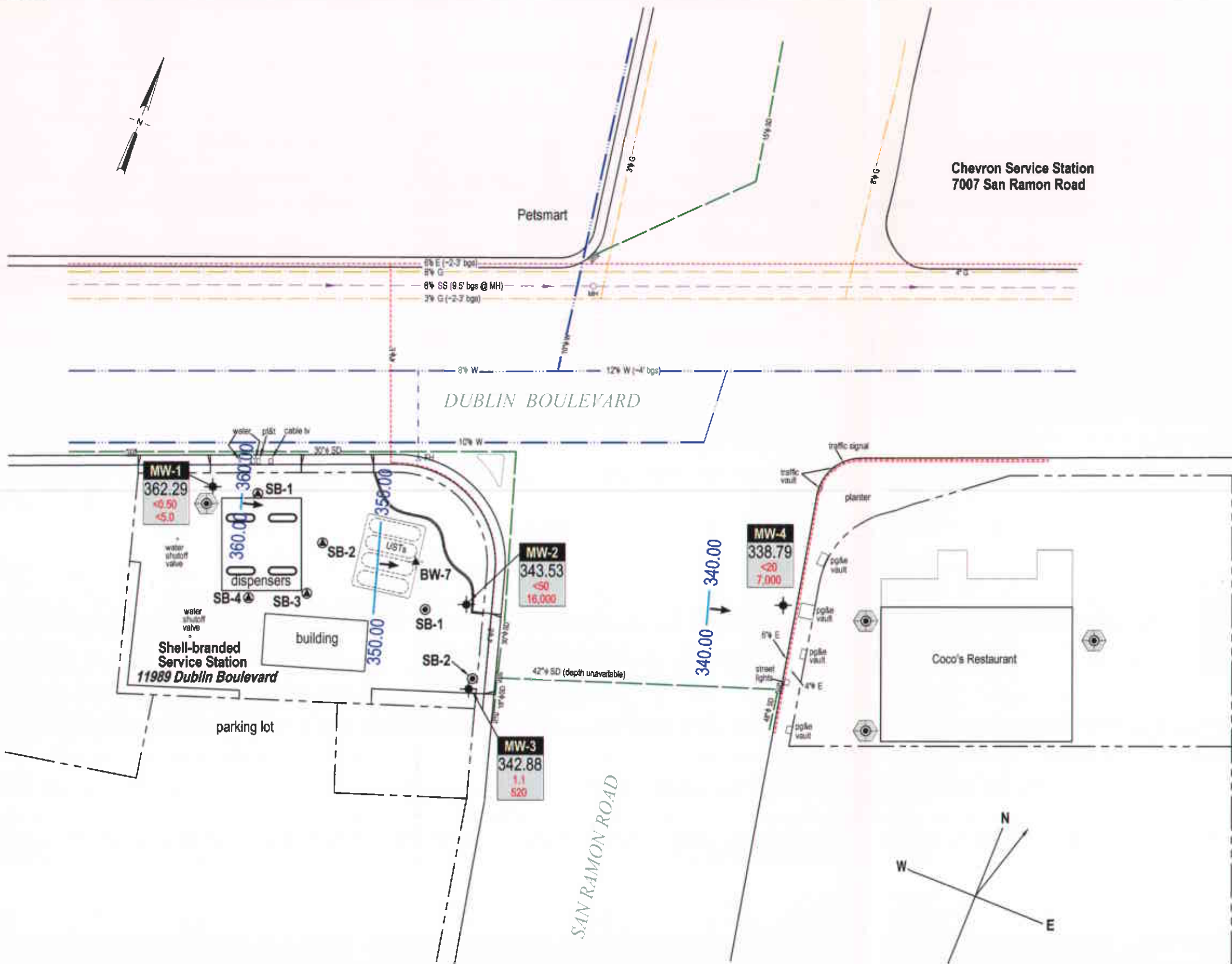
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Shell-branded Service Station
 11989 Dublin Boulevard
 Dublin, California

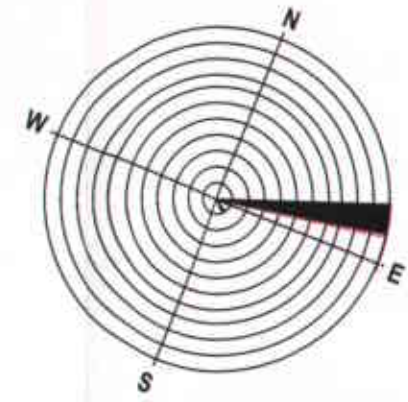


**Vicinity/Area Well
 Survey Map**
 (1/2 Mile Radius)



EXPLANATION

- Proposed soil boring location
- 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)
- SD** Storm drain inlet
- 8.25' 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** Well designation
- ELEV** Groundwater elevation, in feet above msl
- Benzene** Benzene and MTBE concentrations are in parts per billion and are analyzed by EPA Method 8260.
- MTBE**



Groundwater Gradient Direction (07/20/99 to 07/15/02)

FIGURE 2



CAMBRIA

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
	05/22/02	20,000	<50	<50	<50	6,300	---
	07/15/02	16,000	<50	<50	<50	3,100	---
MW-3	10/26/01	680	<2.0	<2.0	<2.0	79	<500
	05/22/02	680	<2.0	<2.0	<2.0	58	---
	07/15/02	520	<2.0	<2.0	<2.0	53	---
MW-4	05/22/02	3,200	<5.0	<5.0	<5.0	2,500	---
	07/15/02	7,000	<20	<20	<20	2,000	---

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

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/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)
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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-1	01/11/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	367.99	5.55	362.44	5.4/2.0
MW-1	05/22/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	367.99	5.55	362.44	NA
MW-1	07/15/2002	<50	NA	<0.50	<0.50	<0.50	<0.50	NA	<5.0	367.99	5.70	362.29	NA

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-2	01/11/2002	<5,000	NA	<50	<50	54	<50	NA	15,000	365.43	18.72	346.71	5.1/c
MW-2	05/22/2002	<5,000	NA	53	<50	57	<50	NA	20,000	365.43	20.59	344.84	NA

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)
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MW-2	07/15/2002	<5,000	NA	<50	<50	<50	<50	NA	16,000	365.43	21.90	343.53	NA
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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
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-3	01/11/2002	480	NA	<2.0	<2.0	<2.0	<2.0	NA	830	364.97	18.88	346.09	1.1/3.2
MW-3	05/22/2002	570	NA	<1.0	<1.0	<1.0	<1.0	NA	680	364.97	20.75	344.22	NA
MW-3	07/15/2002	420	NA	1.1	<1.0	<1.0	1.1	NA	520	364.97	22.09	342.88	NA

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
MW-4	01/11/2002	<2,000	NA	<20	<20	<20	<20	NA	5,100	364.01	22.25	341.76	7.9/3.0
MW-4	05/22/2002	<500	NA	<5.0	<5.0	<5.0	<5.0	NA	3,200	364.01	23.96	340.05	NA
MW-4	07/15/2002	<2,500	NA	<20	<20	<20	<20	NA	7,000	363.97	25.18	338.79	NA

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)
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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

Notes:

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

b = Concentration is an estimate.

c = D.O. meter malfunctioning.

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

Wells surveyed August 23, 2001, and February 18, 2002, by Virgil Chavez Land Surveying of Vallejo, California.



Report Number : 27509

Date : 7/23/02

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

Subject : 4 Water Samples
Project Name : 11989 Dublin Boulevard, Dublin
Project Number : BTS# 020715-MN3
P.O. Number : 98995328

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,

A handwritten signature in black ink that reads "Joel Kiff". The signature is written in a cursive style with a large initial "J".

Joel Kiff



Report Number : 27509

Date : 7/23/02

Project Name : 11989 Dublin Boulevard, Dublin

Project Number : BTS# 020715-MN3

Sample : MW-1

Matrix : Water

Lab Number : 27509-01

Sample Date : 7/15/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	7/21/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	7/21/02
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	7/21/02
4-Bromofluorobenzene (Surr)	98.2		% Recovery	EPA 8260B	7/21/02

Approved By:  Joel Kiff



Report Number : 27509

Date : 7/23/02

Project Name : 11989 Dublin Boulevard, Dublin

Project Number : BTS# 020715-MN3

Sample : MW-2

Matrix : Water

Lab Number : 27509-02

Sample Date : 7/15/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 50	50	ug/L	EPA 8260B	7/19/02
Toluene	< 50	50	ug/L	EPA 8260B	7/19/02
Ethylbenzene	< 50	50	ug/L	EPA 8260B	7/19/02
Total Xylenes	< 50	50	ug/L	EPA 8260B	7/19/02
Methyl-t-butyl ether (MTBE)	16000	50	ug/L	EPA 8260B	7/19/02
Diisopropyl ether (DIPE)	< 50	50	ug/L	EPA 8260B	7/19/02
Ethyl-t-butyl ether (ETBE)	< 50	50	ug/L	EPA 8260B	7/19/02
Tert-amyl methyl ether (TAME)	< 50	50	ug/L	EPA 8260B	7/19/02
Tert-Butanol	3100	500	ug/L	EPA 8260B	7/19/02
TPH as Gasoline	< 5000	5000	ug/L	EPA 8260B	7/19/02
Toluene - d8 (Surr)	96.4		% Recovery	EPA 8260B	7/19/02
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	7/19/02

Approved By:  Joel Kiff



Report Number : 27509

Date : 7/23/02

Project Name : 11989 Dublin Boulevard, Dublin

Project Number : BTS# 020715-MN3

Sample : MW-3

Matrix : Water

Lab Number : 27509-03

Sample Date : 7/15/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1.1	1.0	ug/L	EPA 8260B	7/19/02
Toluene	< 1.0	1.0	ug/L	EPA 8260B	7/19/02
Ethylbenzene	< 1.0	1.0	ug/L	EPA 8260B	7/19/02
Total Xylenes	1.1	1.0	ug/L	EPA 8260B	7/19/02
Methyl-t-butyl ether (MTBE)	520	1.0	ug/L	EPA 8260B	7/19/02
Diisopropyl ether (DIPE)	< 2.0	2.0	ug/L	EPA 8260B	7/19/02
Ethyl-t-butyl ether (ETBE)	< 2.0	2.0	ug/L	EPA 8260B	7/19/02
Tert-amyl methyl ether (TAME)	< 2.0	2.0	ug/L	EPA 8260B	7/19/02
Tert-Butanol	53	50	ug/L	EPA 8260B	7/19/02
TPH as Gasoline	420	100	ug/L	EPA 8260B	7/19/02
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	7/19/02
4-Bromofluorobenzene (Surr)	88.7		% Recovery	EPA 8260B	7/19/02

Approved By:  Joel Kiff



Report Number : 27509

Date : 7/23/02

Project Name : 11989 Dublin Boulevard, Dublin

Project Number : BTS# 020715-MN3


Sample : MW-4

Matrix : Water

Lab Number : 27509-04

Sample Date : 7/15/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 20	20	ug/L	EPA 8260B	7/19/02
Toluene	< 20	20	ug/L	EPA 8260B	7/19/02
Ethylbenzene	< 20	20	ug/L	EPA 8260B	7/19/02
Total Xylenes	< 20	20	ug/L	EPA 8260B	7/19/02
Methyl-t-butyl ether (MTBE)	7000	25	ug/L	EPA 8260B	7/21/02
Diisopropyl ether (DIPE)	< 20	20	ug/L	EPA 8260B	7/19/02
Ethyl-t-butyl ether (ETBE)	< 20	20	ug/L	EPA 8260B	7/19/02
Tert-amyl methyl ether (TAME)	< 20	20	ug/L	EPA 8260B	7/19/02
Tert-Butanol	2000	250	ug/L	EPA 8260B	7/21/02
TPH as Gasoline	< 2500	2500	ug/L	EPA 8260B	7/21/02
Toluene - d8 (Surr)	98.1		% Recovery	EPA 8260B	7/19/02
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	7/19/02

Approved By:  Joel Kiff

Report Number : 27509

Date : 7/23/02

QC Report : Method Blank Data

Project Name : **11989 Dublin Boulevard, Dublin**

Project Number : **BTS# 020715-MN3**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	7/19/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	7/19/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	7/19/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	7/19/02
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	7/19/02
Diisopropyl ether (DIPE)	< 2.0	2.0	ug/L	EPA 8260B	7/19/02
Ethyl-t-butyl ether (ETBE)	< 2.0	2.0	ug/L	EPA 8260B	7/19/02
Tert-amyl methyl ether (TAME)	< 2.0	2.0	ug/L	EPA 8260B	7/19/02
Tert-Butanol	< 50	50	ug/L	EPA 8260B	7/19/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	7/19/02
Toluene - d8 (Surr)	95.9		%	EPA 8260B	7/19/02
4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	7/19/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	7/21/02
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	7/21/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	7/21/02
Toluene - d8 (Surr)	103		%	EPA 8260B	7/21/02
4-Bromofluorobenzene (Surr)	98.4		%	EPA 8260B	7/21/02

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

Report Number : 27509

Date : 7/23/02

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **11989 Dublin Boulevard,**

Project Number : **BTS# 020715-MN3**

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	27503-02	<0.50	20.0	19.9	21.2	21.8	ug/L	EPA 8260B	7/19/02	106	109	2.90	70-130	25
Toluene	27503-02	<0.50	20.0	19.9	20.0	20.4	ug/L	EPA 8260B	7/19/02	100	102	2.02	70-130	25
Tert-Butanol	27503-02	<5.0	100	99.7	116	110	ug/L	EPA 8260B	7/19/02	116	110	5.07	70-130	25
Methyl-t-Butyl Ether	27503-02	<0.50	20.0	19.9	18.0	18.5	ug/L	EPA 8260B	7/19/02	90.1	93.0	3.11	70-130	25
Benzene	27570-03	<0.50	40.0	40.0	38.8	38.8	ug/L	EPA 8260B	7/21/02	97.0	97.1	0.103	70-130	25
Toluene	27570-03	<0.50	40.0	40.0	40.8	41.1	ug/L	EPA 8260B	7/21/02	102	103	0.880	70-130	25
Tert-Butanol	27570-03	<5.0	200	200	186	198	ug/L	EPA 8260B	7/21/02	92.8	98.8	6.32	70-130	25
Methyl-t-Butyl Ether	27570-03	<0.50	40.0	40.0	41.3	42.9	ug/L	EPA 8260B	7/21/02	103	107	3.85	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 27509

Date : 7/23/02

QC Report : Laboratory Control Sample (LCS)

Project Name : 11989 Dublin Boulevard,

Project Number : BTS# 020715-MN3

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	20.0	ug/L	EPA 8260B	7/19/02	101	70-130
Toluene	20.0	ug/L	EPA 8260B	7/19/02	97.1	70-130
Tert-Butanol	100	ug/L	EPA 8260B	7/19/02	99.3	70-130
Methyl-t-Butyl Ether	20.0	ug/L	EPA 8260B	7/19/02	85.6	70-130
Benzene	40.0	ug/L	EPA 8260B	7/21/02	97.0	70-130
Toluene	40.0	ug/L	EPA 8260B	7/21/02	103	70-130
Tert-Butanol	200	ug/L	EPA 8260B	7/21/02	96.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	7/21/02	104	70-130

KIFF ANALYTICAL, LLC

Approved By:  Joel Kiff

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

LAB: ERT

SHELL Chain Of Custody Record

Lab Identification (if necessary):

Address:

City, State, Zip:

Shell Project Manager to be invoiced:

SCIENCE & ENGINEERING
 TECHNICAL SERVICES
 CRMT HOUSTON

Karen Petryna

27509

INCIDENT NUMBER (S&E ONLY)

9 8 9 9 5 3 2 8

SAP or CRMT NUMBER (TS/CRMT)

DATE: 7/15/02

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 Kream		PHONE NO.: 510-420-3335	CONSULTANT PROJECT NO.: BTS # 02-0715-JWS
PROJECT CONTACT (Hardcopy or PDF Report to): Leon Gearhart		SAMPLER NAME(S) (Print): Michael Niwskata		E-MAIL: ShellOaklandEDF@cambria-env.com	
TELEPHONE: 408-573-0555	FAK: 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

FIELD NOTES:

Container/Preservative
or PID Readings
or Laboratory Notes

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 (9) by (8260B)	Ethanol (8260B)	Methanol	1,2-DCA (8260B)	EDB (8260B)	TPH - Diesel, Extractable (8015m)	TEMPERATURE ON RECEIPT C°
		DATE	TIME													
	MW-1	7/15/02	1405	W	3	X	X	X								-01
	MW-2	7/15/02	1439			X	X		X							-02
	MW-3	7/15/02	1453			X	X		X							-03
	MW-4	7/15/02	1454			X	X		X							-04

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) <i>John Little / K. P. Analytical</i>	Date: <u>07/16/02</u>	Time: <u>1035</u>

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

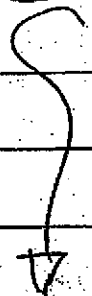
10/16/00 Revision

Q&O Graphic (714) 999-9702

WELL GAUGING DATA

Project # 020715-MN3 Date 7/15/00 Client Egvinu

Site 11989 Dublin Blvd. Dublin # 9899528

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					5.70	19.78	
MW-2	4					21.90	32.53	
MW-3	4					22.09	32.65	
MW-4	2					25.18	35.20	

SHELL WELL MONITORING DATA SHEET

BTS #: <u>02-0715-MW3</u>	Site: <u>98995328</u>
Sampler: <u>Mike N.</u>	Date: <u>7/15/02</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth (TD): <u>19.78</u>	Depth to Water (DTW): <u>5.70</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]: _____	

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input checked="" type="checkbox"/> Electric Submersible	Water: <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: _____
--	---	--

<u>9.2</u> (Gals.) X	<u>3</u>	= <u>28.5</u> Gals.
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 µS)	Turbidity (NTUs)	Gals. Removed	Observations
1358	69.8	7.1	1176	91	9.5	cloudy
1359	72.1	6.7	1156	32	19.0	clearing
1401	72.0	6.7	1138	45	28.5	cloudiness

Did well dewater? Yes No _____ Gallons actually evacuated: 28.5

Sampling Date: 7/15/02 Sampling Time: 1405 Depth to Water: _____

Sample I.D.: MW-1 Laboratory: Kiff SPL Other _____

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

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 #: <u>02-0715-MW3</u>	Site: <u>98995328</u>
Sampler: <u>Mike N.</u>	Date: <u>7/15/02</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>32.53</u>	Depth to Water (DTW): <u>21.90</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]:	

Purge Method: Bailer Disposable Bailer Middleburg <input checked="" type="checkbox"/> Electric Submersible	Water: Peristaltic Extraction Pump Other: _____	Sampling Method: <input checked="" type="checkbox"/> Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
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69.8 (Gals.) X 3 = 21.0 Gals.
 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 µS)	Turbidity (NTUs)	Gals. Removed	Observations
1502	70.1	6.6	1142	87	7.0	Slightly cloudy, odor
1504	69.5	6.6	1118	46	14.0	Clearing, odor
1505	69.2	6.6	1115	57	21.0	↑ cloudiness "

Did well dewater? Yes No Gallons actually evacuated: 21.0

Sampling Date: 7/15/02 Sampling Time: 1510 Depth to Water:

Sample I.D.: MW-2 Laboratory: Kiff SPL Other:

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

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
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O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
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SHELL WELL MONITORING DATA SHEET

BTS #: <u>020715-MW3</u>	Site: <u>98995328</u>
Sampler: <u>Mike N.</u>	Date: <u>7/15/02</u>
Well I.D.: <u>MW-3</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>32.65</u>	Depth to Water (DTW): <u>22.09</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVL</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: <input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input checked="" type="checkbox"/> Electric Submersible	Waters Peristaltic 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: _____
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$6.7 \text{ (Gals.)} \times 3 = 21.0 \text{ Gals.}$ <p style="margin: 0;">I Case Volume Specified Volumes Calculated Volume</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <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
1444	70.5	6.7	1204	43	7.6	Slightly Cloudy
1446	69.3	6.6	1200	27	14.0	clear
1449	68.5	6.6	1218	18	21.0	LI

Did well dewater? Yes No Gallons actually evacuated: 21.0

Sampling Date: 7/15/02 Sampling Time: 1453 Depth to Water: _____

Sample I.D.: MW-3 Laboratory: Kiff SPL Other _____

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

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 #: <u>02-0715-MN3</u>	Site: <u>98995328</u>
Sampler: <u>Mike N.</u>	Date: <u>7/15/02</u>
Well I.D.: <u>MW-4</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth (TD): <u>35.20</u>	Depth to Water (DTW): <u>25.18</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]:	

Purge Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input type="checkbox"/> Electric Submersible	Water: <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other _____	Sampling Method: <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____
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$1.6 \text{ (Gals.)} \times 3 = 4.8 \text{ Gals.}$ I 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
1425	69.4	6.9	1057	>200	1.6	Light Brown, Cloudy
1427	68.1	6.6	1089	>200	3.2	
1429	68.6	6.7	1122	>200	4.8	

Did well dewater? Yes No Gallons actually evacuated: 4.8

Sampling Date: 7/15/02 Sampling Time: 1434 Depth to Water:

Sample I.D.: MW-4 Laboratory: Kiff SPL Other _____

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

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