GETTLER-RYAN INC.

TRANSMITTAL

September 2, 1999
G-R #:180022

Response to 11/2/99

STID 4104

TO: Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

CC: Mr. Keith Romstad
ERI
73 Digital Drive, Suite 100
Novato, California 94949

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Tosco(Unocal) SS #7176
7850 Amador Valley Blvd.
Dublin, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 25, 1999	Groundwater Monitoring and Sampling Report Third Quarter 1999 - Event of July 1, 1999

COMMENTS:

This report is being sent to you for your review/comment, prior to being distributed on your behalf. If no comments are received by ***September 15, 1999***, this report will be distributed to the following:

Enclosure

cc: **Mr. Amir K. Gholami, REHS**
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

99 SEP 15 PM 3:42
ENVIRONMENTAL PROTECTION

agency/7176dbd.qmt

GETTLER-RYAN INC.

August 25, 1999
G-R Job #180022

Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

RE: Third Quarter 1999 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #7176
7850 Amador Valley Boulevard
Dublin, California

Dear Mr. De Witt:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On July 1, 1999, field personnel monitored and sampled five wells (U-1, U-2, U-3, MW-4, and MW-5) at the above referenced site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in the wells. Static water level data and groundwater elevations are summarized in Table 1. Dissolved Oxygen Concentrations are summarized in Table 2. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are summarized in Table 1. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

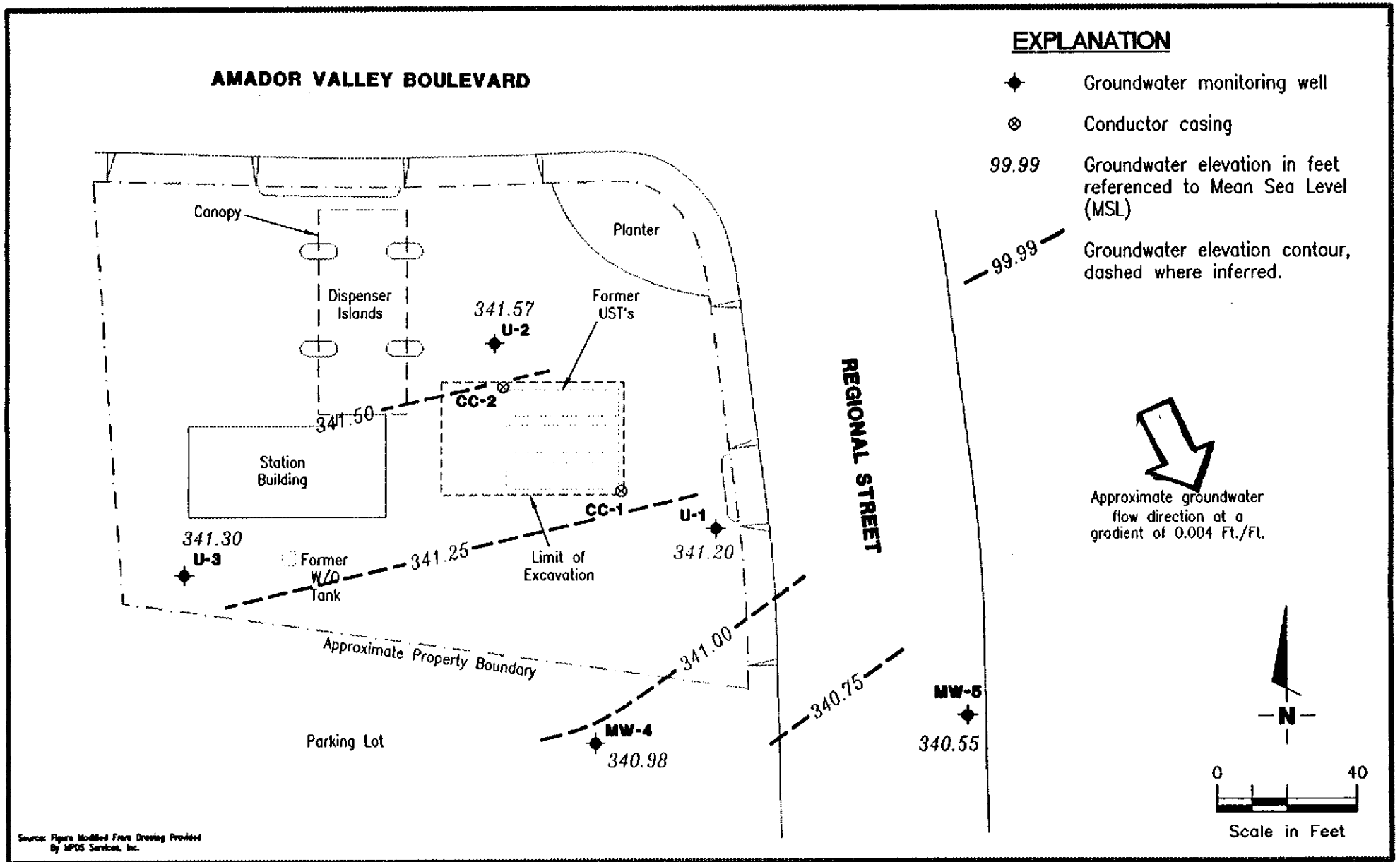
Deanna L. Harding
Project Coordinator

Stephen J. Carter
Senior Geologist, R.G. No. 5577

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Dissolved Oxygen Concentrations
Table 3: Groundwater Analytical Results - Oxygenate Compounds
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

7176.qml



Gettler - Ryan Inc.
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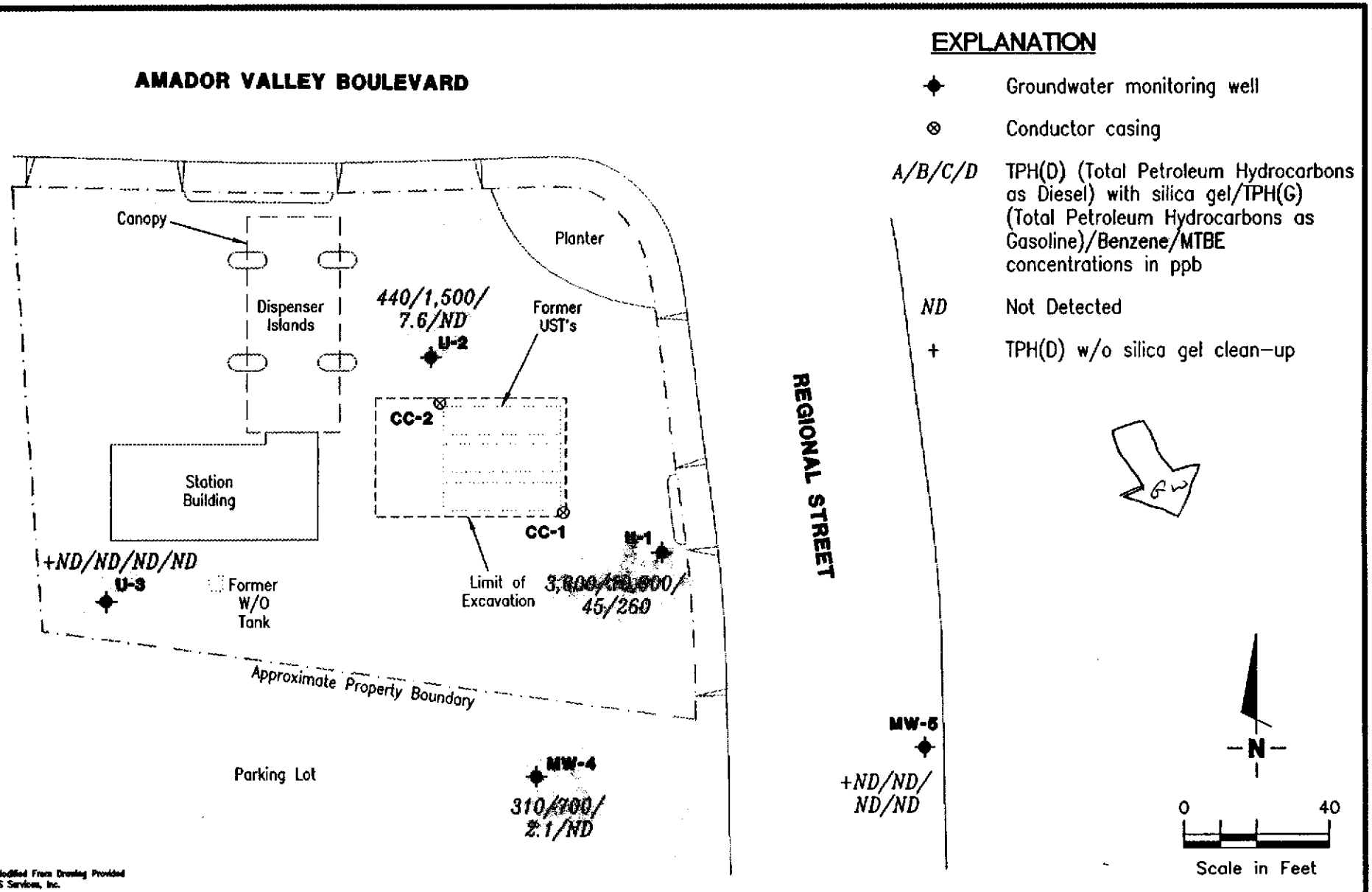
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 7176
7850 Amador Valley Boulevard
Dublin, California

FIGURE 1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180022		July 1, 1999	



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CONCENTRATION MAP
Tosco (Unocal) Service Station No. 7176
7850 Amador Valley Boulevard
Dublin, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180022		July 1, 1999	

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7176

7850 Amador Valley Boulevard

Dublin, California

Well ID/ TOC*		Date	DTW (ft.)	GWE (msl)	TPH(D) ♦ (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-1											
355.62		07/08/95	12.59	343.03	9,400[3]	39,000	1,500	19	1,600	5,200	--
		10/12/95	15.38	340.24	4,200[5]	33,000	1,400	ND	1,400	3,100	--[7]
		01/11/96[1]	16.33	339.29	8,200[5]	8,300	690	11	680	1,500	--[8]
		04/11/96[2]	12.20	343.42	630[5]	3,200	110	ND	180	290	790
		07/10/96	13.84	341.78	2,200[5]	2,600	81	4.4	210	230	510
		10/30/96	15.85	339.77	560[5]	2,200	67	19	140	150	360
		01/27/97	12.20	343.42	2,300[5]	4,600	98	ND	360	290	150
		04/08/97	13.46	342.16	1,300[5]	2,800	50	ND	220	140	ND
		07/17/97	15.30	340.32	460[6]	2,300	30	4.5	140	94	190
		10/17/97	16.33	339.29	510[6]	1,500	31	6.7	110	88	220
		01/19/98	14.34	341.28	[10]1,900/1,300[10]	3,100	46	3.4	310	200	170
355.59	NP	04/23/98	11.16	344.43	--/1,700[11]	3,400	72	3.8	470	350	280
	NP	07/08/98	12.67	342.92	2,000[14]	4,500	51	ND[12]	590	430	190
		10/05/98	14.57	341.02	--/2,500[10]	7,500[16]	53	ND[12]	680	350	190/180[17]
		01/04/99	15.35	340.24	[11]2,700/2,500[11]	10,000[19]	ND[12]	ND[12]	1,200	540	ND[12]
		04/05/99	13.64	341.95	[10]920/570[10]	4,900	34	ND[12]	350	150	150/55[17]
		07/01/99	**14.39**	**341.20**	**[10]2,700/3,600[26]**	**10,000**	**45**	**ND[12]**	**850**	**420**	**260/110[17]**
U-2											
356.59		07/08/95	12.68	343.91	4,700[3]	17,000	430	ND	2,200	590	--
		10/12/95	16.01	340.58	3,600[5]	24,000	310	60	1,900	190	--[7]
		01/11/96[1]	17.06	339.53	8,600[5]	10,000	210	55	1,400	240	--[8]
		04/11/96[2]	12.75	343.84	1,900[5]	7,700	130	27	1,100	110	340
		07/10/96	14.42	342.17	2,300[5]	5,600	59	15	610	42	250
		10/30/96	16.82	339.77	1,800[5]	7,700	67	35	1,000	54	260
		01/27/97	12.91	343.68	660[5]	1,600	14	ND	130	7.0	100
		04/08/97	14.07	342.52	2,000[5]	4,300	35	ND	400	16	ND
		07/17/97	15.96	340.63	1,300[6]	6,200	17	22	410	ND	130
		10/17/97	17.03	339.56	1,400[6]	7,100	71	26	520	50	ND
		01/19/98	15.10	341.49	[10]2,100/1,500[10]	5,300	46	11	350	16	110
356.55	NP	04/23/98	11.74	344.81	--/1,200[11]	3,200	23	11	210	38	160
	NP	07/08/98	13.27	343.28	1,100[14]	1,600	34	8.5	100	7.4	190
		10/05/98	14.90	341.65	--/1,300[10]	2,900[18]	37	8.4	110	7.3	78

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7176

7850 Amador Valley Boulevard

Dublin, California

Well ID/ TOC*		Date	DTW (ft.)	GWE (msl)	TPH(D) ♦ (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
U-2		01/04/99	15.94	340.61	[11]670/250[20]	2,200[21]	35	ND[12]	17	ND[12]	86
(cont)		04/05/99	14.19	342.36	[10]660/490[10]	4,900	21	77	130	310	100/6.9[17]
		07/01/99	**14.98**	**341.57**	**[24]210/440[26]**	**1,500[25]**	**7.6**	**ND[12]**	**ND[12]**	**ND[12]**	**[12]ND/35[17]**
U-3											
358.13		07/08/95	14.58	343.55	710[3]	1,100[4]	0.57	2.1	1.7	2.4	--
		10/12/95	17.60	340.53	470[6]	560	ND	0.87	0.7	1.1	--
		01/11/96[1]	18.65	339.48	260[6]	230	0.62	0.91	0.97	1.9	--
		04/11/96	13.20	344.93	ND	68[9]	ND	ND	ND	ND	ND
		07/10/96	15.98	342.15	ND	ND	ND	ND	ND	ND	ND
		10/30/96	18.24	339.89	ND	70	ND	ND	ND	ND	ND
		01/27/97	14.41	343.72	ND	ND	ND	ND	ND	ND	ND
		04/08/97	15.73	342.40	ND	ND	ND	ND	ND	ND	ND
		07/17/97	17.54	340.59	ND	ND	ND	ND	ND	ND	ND
		10/17/97	18.64	339.49	63[6]	ND	ND	ND	ND	ND	ND
		01/19/98	16.67	341.46	[10]68/ND	ND	ND	ND	ND	ND	ND
358.09	NP	04/23/98	13.28	344.81	--/ND	ND	ND	ND	ND	ND	ND
	NP	07/08/98	14.90	343.19	80[15]	ND	ND	ND	ND	ND	ND
		10/05/98	16.50	341.59	--/ND	ND	ND	ND	ND	ND	ND
		01/04/99	17.70	340.39	ND	ND	ND	ND	ND	ND	ND
		04/05/99	15.67	342.42	ND	ND	ND	ND	ND	ND	ND/ND[17]
		07/01/99	**16.79**	**341.30**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND/ND[17]**
MW-4											
356.41		04/23/98	12.11	344.30	--/1,400[11]	2,500	5.9	6.4	16	31	ND[12]
		07/08/98	13.70	342.71	1,400[11]	1,000[13]	ND[12]	ND[12]	ND[12]	ND[12]	ND[12]
		10/05/98	15.18	341.23	--/230[10]	890[16]	ND[12]	ND[12]	ND[12]	14	ND[12]
		01/04/99	16.39	340.02	[10]71/71[10]	230[22]	0.56	1.3	1.4	1.8	10
		04/05/99	14.61	341.80	[10]340/210[10]	620[23]	ND[12]	1.8	2.1	ND[12]	6.0/9.3[17]
		07/01/99	**15.43**	**340.98**	**[24]260/310[26]**	**700[19]**	**2.1**	**ND[12]**	**1.9**	**2.4**	**[12]ND/21[17]**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7176

7850 Amador Valley Boulevard

Dublin, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(D) ♦ (ppb)	TPH(G) (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5										
355.03	04/23/98	11.15	343.88	--/100[11]	120	0.53	0.90	1.0	3.8	13
	07/08/98	12.63	342.40	170[10]	ND	ND	ND	ND	ND	12
	10/05/98	14.00	341.03	--/100[10]	ND	ND	ND	ND	ND	12
	01/04/99	15.21	339.82	ND	ND	ND	ND	ND	ND	ND
	04/05/99	13.76	341.27	ND	ND	ND	ND	ND	ND	ND/ND[17]
	07/01/99	**14.48**	**340.55**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**[12]ND/2.3[17]**
Trip Blank										
TB-LB	01/19/98	--	--	--	ND	ND	ND	ND	ND	ND
	04/23/98	--	--	--	ND	ND	ND	ND	ND	ND
	07/08/98	--	--	--	ND	ND	ND	ND	ND	ND
	10/05/98	--	--	--	ND	ND	0.70	ND	0.71	ND
	01/04/99	--	--	--	ND	ND	0.74	ND	0.92	ND
	04/05/99	--	--	--	ND	ND	ND	ND	ND	ND
	07/01/99	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #7176
7850 Amador Valley Boulevard
Dublin, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to January 19, 1998, were compiled from reports prepared by MPDS Services, Inc.

TOC = Top of Casing elevation
DTW = Depth to Water
(ft.) = Feet
GWE = Groundwater Elevation
msl = Relative to mean sea level
TPH(D) = Total Petroleum Hydrocarbons as Diesel
TPH(G) = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether
ppb = Parts per billion
ND = Not Detected
-- = Not Measured/Not Analyzed
NP = No purge
PNA = Polynuclear Aromatic Hydrocarbons

* TOC elevations were surveyed relative to msl, per the Benchmark AM-STW1977 located at the easterly return at the most easterly corner of intersection at Amador Valley Boulevard and Starward Street (Elevation = 344.17 feet msl).

♦ Analytical results reported as follows: TPH(D)/TPH(D) with silica gel cleanup.

1 PNA compound naphthalene was detected in well U-1 at a concentration of 320 ppb, and at a concentration of 310 ppb in well U-2. All other PNA compounds were ND in both wells.
2 PNA compounds were ND.
3 Laboratory report indicates unidentified hydrocarbons C9-C26.
4 Laboratory report indicates gasoline and unidentified hydrocarbons >C12.
5 Laboratory report indicates the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
6 Laboratory report indicates the hydrocarbons detected did not appear to be diesel.
7 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.
8 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppb in the sample collected from this well.
9 Laboratory report indicates the hydrocarbons detected did not appear to be gasoline.
10 Laboratory report indicates unidentified hydrocarbons C9-C24.
11 Laboratory report indicates diesel and unidentified hydrocarbons <C14.
12 Detection limit raised. Refer to analytical results.
13 Laboratory report indicates unidentified hydrocarbons >C8.
14 Laboratory report indicates unidentified hydrocarbons <C14.
15 Laboratory report indicates discrete peaks.
16 Laboratory report indicates weathered gas C6-C12.
17 MTBE by EPA Method 8260.
18 Laboratory report indicates unidentified hydrocarbons <C8.
19 Laboratory report indicates gasoline and unidentified hydrocarbons C6-C12.
20 Laboratory report indicates diesel and unidentified hydrocarbons <C16.
21 Laboratory report indicates unidentified hydrocarbons C6-C12.
22 Laboratory report indicates gasoline and unidentified hydrocarbons >C10.
23 Laboratory report indicates gasoline and unidentified hydrocarbons <C7.
24 Laboratory report indicates unidentified hydrocarbons C10-C24.
25 Laboratory report indicates gasoline and unidentified hydrocarbons <C6.
26 Laboratory report indicates and unidentified hydrocarbons <C16.

Table 2

Dissolved Oxygen Concentrations

Tosco (Unocal) Service Station #7176

7850 Amador Valley Boulevard

Dublin, California

Well ID	Date	Before Purging (mg/L)	After Purging (mg/L)
U-1	01/11/96	--	3.41
	04/11/96	3.77	3.78
	07/10/96[1]	1.22	--
	10/30/96[1]	1.41	--
	01/27/97[1]	1.34	--
	04/08/97[1]	2.09	--
	07/17/97[1]	2.00	--
	10/17/97[1]	1.86	--
	01/19/98[1]	2.91	--
	04/23/98[1]	0.59	--
	07/08/98[1]	1.10	--
U-2	01/11/96	--	3.99
	04/11/96	3.32	3.41
	07/10/96[1]	1.01	--
	10/30/96[1]	1.42	--
	01/27/97[1]	1.29	--
	04/08/97[1]	1.69	--
	07/17/97[1]	2.08	--
	10/17/97[1]	1.80	--
	01/19/98[1]	2.95	--
	04/23/98[1]	0.55	--
	07/08/98[1]	1.36	--
U-3	01/11/96	--	5.05
	04/11/96	5.16	4.96
	07/10/96[1]	3.44	--
	10/30/96[1]	2.18	--
	01/27/97[1]	2.61	--
	04/08/97[1]	3.73	--
	07/17/97[1]	2.65	--
	10/17/97[1]	2.44	--
	01/19/98[1]	6.51	--
	04/23/98[1]	4.72	--
	07/08/98[1]	4.35	--
CC-1	10/02/95	2.83	--

EXPLANATIONS:

Dissolved oxygen concentrations prior to January 19, 1998, were compiled from reports prepared by MPDS Services, Inc.

CC-1 = Conductor casing in the underground storage tank backfill

-- = Not Measured

mg/L = milligrams per liter

[1] The wells were not purged on this date.

Note: Measurements were taken using a LaMotte DO4000 dissolved oxygen meter.

Table 3

Dissolved Oxygen Concentrations

Tosco (Unocal) Service Station #7176

7850 Amador Valley Boulevard

Dublin, California

Well ID	Date	Ethanol (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDB (ppb)	1,2-DCA (ppb)
U-1	04/05/99	ND[1]	ND[1]	55	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	07/01/99	**ND**	**ND**	**110**	**ND**	**ND**	**ND**	**ND**	**ND**
U-2	04/05/99	ND[1]	ND[1]	6.9	ND[1]	ND[1]	ND[1]	ND[1]	ND[1]
	07/01/99	**ND**	**ND**	**35**	**ND**	**ND**	**ND**	**ND**	**ND**
U-3	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND
	07/01/99	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-4	04/05/99	ND	ND	9.3	ND	ND	ND	ND	ND
	07/01/99	**ND**	**ND**	**21**	**ND**	**ND**	**ND**	**ND**	**ND**
MW-5	04/05/99	ND	ND	ND	ND	ND	ND	ND	ND
	07/01/99	**ND**	**ND**	**2.3**	**ND**	**ND**	**ND**	**ND**	**ND**

EXPLANATIONS:

TBA = Tertiary Butyl Alcohol
MTBE = Methyl Tertiary Butyl Ether
DIPE = Di-isopropyl Ether
ETBE = Ethyl Tertiary Butyl Ether
TAME = Tertiary Amyl Methyl Ether
EDB = 1,2-Dibromomethane
1,2-DCA = 1,2-Dichloroethane
ppb = Parts per billion
ND = Not Detected

[1] Detection limit raised. Refer to analytical results.

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, temperature, pH and electrical conductivity are measured. If purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. The measurements are taken a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 7-1-99

City: Dublin Sampler: Joe

Well ID U-1 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 27.90 ft.

Depth to Water 14.39 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

13.51 X VF 0.17 = 2.30 X 3 (case volume) = Estimated Purge Volume: 7 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- (Suction)
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 9:45 Weather Conditions: clear

Sampling Time: 10:05 A.M Water Color: clear Odor: Same

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (x 1000) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:55	2.5	7.10	3.63	71.2			
9:57	5	7.07	3.60	72.2			
9:59	7	7.12	3.68	73.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-1	3 VOA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
"	2 VOA	"	"	"	EDB, EDC - OXYS
"	1 Amb	"	"	"	TPHD (Silica Gel)

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility #7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 7-1-99

City: Dublin Sampler: Joe

Well ID U-2 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 26.50 ft.

Depth to Water 14.98 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.52 X VF 0.17 = 1.96 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- (Suction)
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 9:15 Weather Conditions: clear

Sampling Time: 9:35 AM Water Color: clear Odor: yes

Purging Flow Rate: 1 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (µmhos/cm) X 100	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:25	2	7.14	3.33	73.0			
9:27	4	7.10	3.37	73.1			
9:29	6	7.20	3.41	72.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-2	3 VOA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
"	2 VOA	"	"	"	EDB, EDC-oxys
✓	1 Amb	"	"	"	TPHD (Silica Gel)

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility #7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 7-1-99

City: Dublin Sampler: Joe

Well ID U-3 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 28.50 ft.

Depth to Water 16.79 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

11.71 X VF 0.17 = 1.99 X 3 (case volume) = Estimated Purge Volume: 6 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; (Suction); Grundfos; Other: _____

Sampling Equipment: (Disposable Bailer); Bailer; Pressure Bailer; Grab Sample; Other: _____

Starting Time: 7:12 Weather Conditions: clear

Sampling Time: 7:40 A.M Water Color: clear Odor: none

Purging Flow Rate: _____ gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity (X 100) µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
7:20	2	7.37	6.12	72.1			
7:22	4	7.48	6.10	72.6			
7:24	6	7.52	6.15	72.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-3	3 VOA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
"	2 VOA	"	"	"	EDB, EDC Oxys
"	1 Amb	"	"	"	TPHD (Silica Gel)

COMMENTS: _____

9/97-fieldst.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility #7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 7-1-99

City: Dublin Sampler: Joe

Well ID MW-4 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 25.50 ft.

Depth to Water 15.43 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

10.07 X VF 0.17 = 1.71 X 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

Purge Equipment:
- ~~Disposable Bailer~~
- Bailer
- Stack
- ~~Suction~~
- Grundfos
- Other: _____

Sampling Equipment:
- Disposable Bailer
- Bailer
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 8:40 Weather Conditions: clear

Sampling Time: 9:05 A.M. Water Color: clear Odor: none

Purging Flow Rate: 0.5 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:50	1.5	7.90	6.50	66.2			
8:53	3	7.37	6.70	66.5			
8:56	5.5	7.43	6.71	66.2			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	3 VOA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
"	2 VOA	"	"	"	EDB, EDC Oxys
"	1 Amb	"	"	"	TPHD (Silica Gel)

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 7-1-99

City: Dublin Sampler: Joe

Well ID MW-5 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: 0 (feet) Amount Bailed (product/water): 0 (Gallons)

Total Depth 25.00 ft.

Depth to Water 14.48 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

10.52 X VF 0.17 = 1.79 X 3 (case volume) = Estimated Purge Volume: 5.5 (gal.)

Purge Equipment: (Disposable Bailer) / Bailer / Stack / (Suction) / Grundfos / Other: _____

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other: _____

Starting Time: ~~8:00~~ 8:10 Weather Conditions: clear

Sampling Time: ~~8:30 A.M~~ 8:30 A.M Water Color: clear Odor: none

Purging Flow Rate: ~~0.5~~ 0.5 gpm. Sediment Description: none

Did well de-water? _____ If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:12	1.5	7.70	6.16	65.9			
8:15	3	7.51	6.17	65.8			
8:19	5.5	7.53	6.20	65.8			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	3 VOA	Y	HCl	SEQUOIA	TPH(G)/btex/mtbe
"	2 VOA	"	"	"	EDB, EDC-Oxys
"	1 Amb	"	"	"	TPHD (Silica Gel)

COMMENTS: _____

TOSCO

Tosco Marketing Company
3500 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number: UNOCAL SS# 7176
Facility Address: 7850 Amador Valley Blvd. Dublin, CA
Consultant Project Number: 180022.85
Consultant Name: Gettler-Ryan Inc. (G-R Inc.)
Address: 6747 Sierra Court, Suite J, Dublin, CA 94568
Project Contact (Name): Deanna L. Harding
(Phone): 510-551-7555 (Fax Number): 510-551-7888

Contact (Name): MR. DAVE DEWITT
(Phone): (925) 277-2384
Laboratory Name: Sequoia Analytical
Laboratory Release Number:
Samples Collected by (Name): JOE ASEMIAN
Collection Date: 7-1-99 9907077
Signature:

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Oxygenates + EDB + EDC				Remarks
TB-LB		VOA	W	G	—	HCL	Y	✓		9070204										RUN Silica Gel
MW-1		5 VOA 1 AMB	1	1	10:15 AM	1	1	✓	✓	9070205			A-F			✓				Clean-up on any
MW-2		"	1	1	9:35 AM	1	1	✓	✓	9070206						✓				Diesel hits.
MW-3		"	1	1	7:40 AM	1	1	✓	✓	9070207						✓				
MW-4		"	1	1	9:05 AM	1	1	✓	✓	9070208						✓				
MW-5		"	1	1	8:30 AM	1	1	✓	✓	9070209						✓				

DO NOT BILL TB-LB ANALYSIS

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	7-1-99 1100		G-R INC.	7-1-99 1100
	G-R INC.	7-1-99		SEQ.	7-1-99 11:05
		7/1/99 12:30	Received For Laboratory By (Signature)		7/1/99 12:30

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Matrix:	Water	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Jul 21, 1999
Attention: Deanna Harding	First Sample #:	907-0204		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 907-0204 TB-LB	Sample I.D. 907-0205 U-1	Sample I.D. 907-0206 U-2	Sample I.D. 907-0207 U-3	Sample I.D. 907-0208 MW-4	Sample I.D. 907-0209 MW-5
Purgeable Hydrocarbons	50	N.D.	10,000	1,500	N.D.	700	N.D.
Benzene	0.50	N.D.	45	7.6	N.D.	2.1	N.D.
Toluene	0.50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	850	N.D.	N.D.	1.9	N.D.
Total Xylenes	0.50	N.D.	420	N.D.	N.D.	2.4	N.D.
MTBE	2.5	N.D.	260	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	Gasoline	Gasoline & Unidentified Hydrocarbons < C6	--	Gasoline & Unidentified Hydrocarbons C6 - C12	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	20	10	1.0	2.0	1.0
Date Analyzed:	7/13/99	7/14/99	7/13/99	7/13/99	7/13/99	7/13/99
Instrument Identification:	HP-5	HP-2	HP-5	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	83	113	76	82	71	84

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

9070204.GET <1>

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Matrix:	Water	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 3510/8015 Mod.	Reported:	Jul 21, 1999
Attention: Deanna Harding	First Sample #:	907-0205		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 907-0205 U-1	Sample I.D. 907-0206 U-2	Sample I.D. 907-0207 U-3	Sample I.D. 907-0208 MW-4	Sample I.D. 907-0209 MW-5
Extractable Hydrocarbons	50	2,700	210	N.D.	260	N.D.
Chromatogram Pattern:		Unidentified Hydrocarbons C9 - C24	Unidentified Hydrocarbons C10 - C24	--	Unidentified Hydrocarbons C10 - C24	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Extracted:	7/9/99	7/9/99	7/9/99	7/9/99	7/9/99
Date Analyzed:	7/9/99	7/9/99	7/9/99	7/9/99	7/9/99
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

9070204.GET <2>

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Matrix:	Water	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 3510/3630/8015 Mod.	Reported:	Jul 21, 1999
Attention: Deanna Harding	First Sample #:	907-0205		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS W/SILICA GEL CLEAN-UP

Analyte	Reporting Limit µg/L	Sample I.D. 907-0205 U-1	Sample I.D. 907-0206 U-2	Sample I.D. 907-0208 MW-4
Extractable Hydrocarbons	50	3,600	440	310
Chromatogram Pattern:		Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons <C16

Quality Control Data

Report Limit Multiplication Factor:	5.0	1.0	1.0
Date Extracted:	7/9/99	7/9/99	7/9/99
Date Analyzed:	7/17/99	7/17/99	7/17/99
Instrument Identification:	HP-3B	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley

Julianne Fegley
Project Manager

9070204.GET <3>

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Descript:	Water, U-1	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 8260	Analyzed:	Jul 9, 1999
Attention: Deanna Harding	Lab Number:	907-0205	Reported:	Jul 21, 1999

OXYGENATED COMPOUNDS (EPA 8260)

Analyte	Detection Limit µg/L	Sample Results µg/L
Ethanol	500	N.D.
t-Butanol	100	N.D.
Methyl t-Butyl Ether (MTBE)	**2.0**	**110**
Di-Isopropyl Ether (DIPE)	2.0	N.D.
Ethyl t-Butyl Ether (ETBE)	2.0	N.D.
t-Amyl Methyl Ether (TAME)	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.

Surrogates	Control Limit %		% Recovery
Dibromofluoromethane	50	150	89
1,2-Dichloroethane-d4	50	150	82

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

Sequoia Analytical

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Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Descript:	Water, U-2	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 8260	Analyzed:	Jul 9, 1999
Attention: Deanna Harding	Lab Number:	907-0206	Reported:	Jul 21, 1999

OXYGENATED COMPOUNDS (EPA 8260)

Analyte	Detection Limit µg/L	Sample Results µg/L
Ethanol	500	N.D.
t-Butanol	100	N.D.
Methyl t-Butyl Ether (MTBE)	**2.0**	**35**
Di-Isopropyl Ether (DIPE)	2.0	N.D.
Ethyl t-Butyl Ether (ETBE)	2.0	N.D.
t-Amyl Methyl Ether (TAME)	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.

Surrogates	Control Limit %		% Recovery
Dibromofluoromethane	50	150	88
1,2-Dichloroethane-d4	50	150	76

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

9070204.GET <5>

Sequoia Analytical

404 N. Wiget Lane
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FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Descript:	Water, U-3	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 8260	Analyzed:	Jul 9, 1999
Attention: Deanna Harding	Lab Number:	907-0207	Reported:	Jul 21, 1999

OXYGENATED COMPOUNDS (EPA 8260)

Analyte	Detection Limit µg/L	Sample Results µg/L
Ethanol	500	N.D.
t-Butanol	100	N.D.
Methyl t-Butyl Ether (MTBE)	2.0	N.D.
Di-Isopropyl Ether (DIPE)	2.0	N.D.
Ethyl t-Butyl Ether (ETBE)	2.0	N.D.
t-Amyl Methyl Ether (TAME)	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.

Surrogates	Control Limit %		% Recovery
Dibromofluoromethane	50	150	78
1,2-Dichloroethane-d4	50	150	61

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

9070204.GET <6>

Sequoia Analytical

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Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Descript:	Water, MW-4	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 8260	Analyzed:	Jul 10, 1999
Attention: Deanna Harding	Lab Number:	907-0208	Reported:	Jul 21, 1999

OXYGENATED COMPOUNDS (EPA 8260)

Analyte	Detection Limit µg/L	Sample Results µg/L
Ethanol	500	N.D.
t-Butanol	100	N.D.
Methyl t-Butyl Ether (MTBE)	**2.0**	**21**
Di-Isopropyl Ether (DIPE)	2.0	N.D.
Ethyl t-Butyl Ether (ETBE)	2.0	N.D.
t-Amyl Methyl Ether (TAME)	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.

Surrogates	Control Limit %		% Recovery
Dibromofluoromethane	50	150	89
1,2-Dichloroethane-d4	50	150	77

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

Sequoia Analytical

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FAX (925) 988-9673

Gettler-Ryan - Dublin	Client Project ID:	Unocal SS#7176, Dublin	Sampled:	Jul 1, 1999
6747 Sierra Court, Suite J	Sample Descript:	Water, MW-5	Received:	Jul 1, 1999
Dublin, CA 94568	Analysis Method:	EPA 8260	Analyzed:	Jul 14, 1999
Attention: Deanna Harding	Lab Number:	907-0209	Reported:	Jul 21, 1999

OXYGENATED COMPOUNDS (EPA 8260)

Analyte	Detection Limit µg/L	Sample Results µg/L
Ethanol	500	N.D.
t-Butanol	100	N.D.
Methyl t-Butyl Ether (MTBE)	**2.0**	**2.3**
Di-Isopropyl Ether (DIPE)	2.0	N.D.
Ethyl t-Butyl Ether (ETBE)	2.0	N.D.
t-Amyl Methyl Ether (TAME)	2.0	N.D.
1,2-Dibromoethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.

Surrogates	Control Limit %		% Recovery
Dibromofluoromethane	50	150	93
1,2-Dichloroethane-d4	50	150	82

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

9070204.GET <8>

Sequoia Analytical

404 N. Wiget Lane
Walnut Creek, CA 94598
(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#7176, Dublin
Matrix: Liquid
QC Sample Group: 9070204-209

Reported: Jul 21, 1999

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD Batch#:	9070631	9070631	9070631	9070631
Date Prepared:	7/13/99	7/13/99	7/13/99	7/13/99
Date Analyzed:	7/13/99	7/13/99	7/13/99	7/13/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	105	105	105	103
Matrix Spike Duplicate % Recovery:	100	100	100	102
Relative % Difference:	4.9	4.9	4.9	1.6
LCS Batch#:	5LCS071399	5LCS071399	5LCS071399	5LCS071399
Date Prepared:	7/13/99	7/13/99	7/13/99	7/13/99
Date Analyzed:	7/13/99	7/13/99	7/13/99	7/13/99
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	95	95	95	98
% Recovery Control Limits:	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

404 N. Wiget Lane
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(925) 988-9600
FAX (925) 988-9673

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#7176, Dublin
Matrix: Liquid
QC Sample Group: 9070204-209

Reported: Jul 21, 1999

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel	Diesel	MTBE	MTBE
Method:	EPA 8015M.	EPA 8015M.	EPA 8260	EPA 8260
Analyst:	K. Grubb	K. Grubb	N. Nelson	N. Nelson
MS/MSD Batch#:	BLK070999	BLK070999	9062397	9070284
Date Prepared:	7/9/99	7/9/99	7/9/99	-
Date Analyzed:	7/9/99	7/16/99	7/9/99	-
Instrument I.D.#:	HP-3B	HP-3A	GC/MS-2	-
Conc. Spiked:	500 µg/L	500 µg/L	50 µg/L	-
Matrix Spike % Recovery:	82	88	86	-
Matrix Spike Duplicate % Recovery:	78	98	96	-
Relative % Difference:	5.0	11	11	-
LCS Batch#:	LCS070999	LCS071699	LCS070999	LCS071499
Date Prepared:	7/9/99	7/9/99	7/9/99	7/14/99
Date Analyzed:	7/9/99	7/16/99	7/9/99	7/14/99
Instrument I.D.#:	HP-3B	HP-3A	GC/MS-2	GC/MS-2
LCS % Recovery:	76	84	74	78
% Recovery Control Limits:	60-140	35-125	70-130	70-130

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.