GETTLER-RYAN INC.

May 11, 1998
G-R Job #180041

Ms. Tina R. Berry
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

FILE # 5487 SS ✓ BP ____
RPT ____ QM ✓ TRANSMITTAL ____
1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____

RE: Annual 1998 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #5487
28250 Hesperian Boulevard
Hayward, California

Dear Ms. Berry:

This report documents the annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On February 9, 1998, field personnel monitored seven wells (MW-1 through MW-7) and sampled three wells (MW-5, MW-6 and MW-7) 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. 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, and a Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

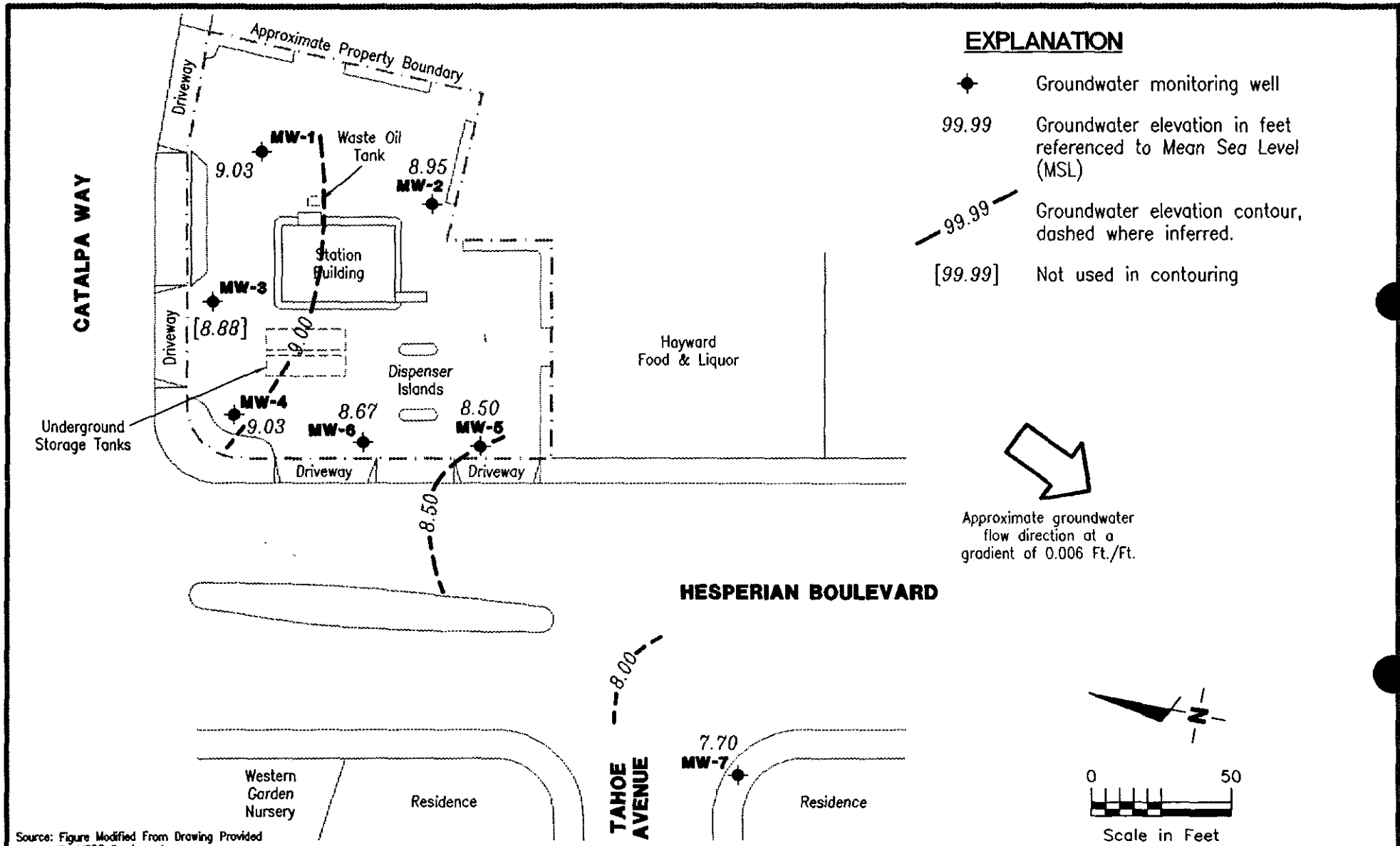
Deanna L. Harding
Project Coordinator

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
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

5487.qml



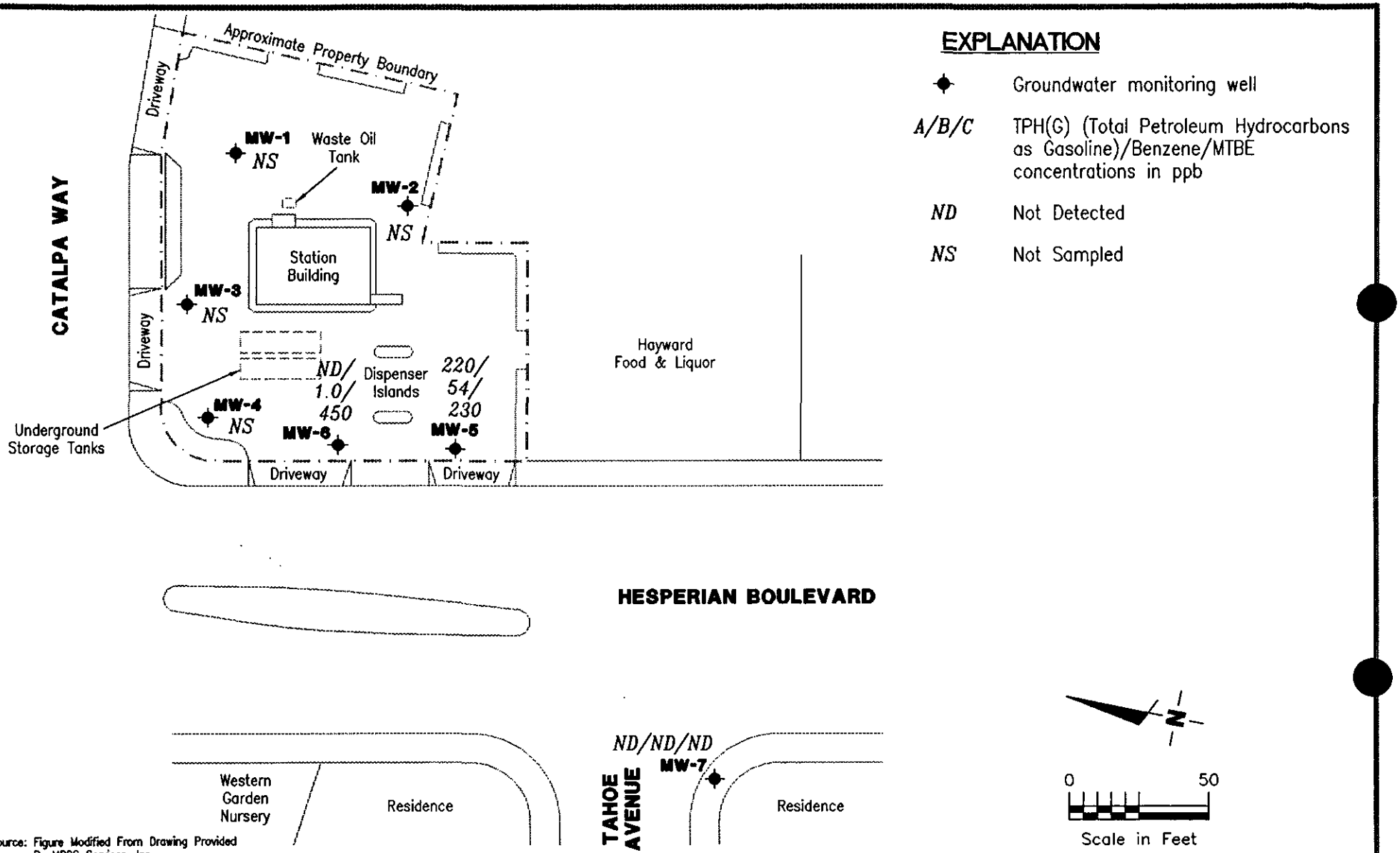
Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 5487
28250 Hesperian Boulevard
Hayward, California

FIGURE 1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180041		February 9, 1998	



Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

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CONCENTRATION MAP
Tosco (Unocal) Service Station No. 5487
28250 Hesperian Boulevard
Hayward, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180041		February 9, 1998	

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) service Station #5487

28250 Hesperian Boulevard

Hayward, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				<----------ppb---------->					
MW-1									
	04/26/89[1]	--	--	ND	2.1	ND	ND	ND	--
	08/16/89[2]	--	--	ND	ND	ND	ND	ND	--
	11/14/89[1]	--	--	ND	ND	ND	ND	ND	--
	02/16/90[1]	--	--	ND	ND	ND	ND	ND	--
	05/16/90[1]	--	--	ND	ND	ND	ND	ND	--
	08/29/90[1]	--	--	ND	ND	ND	ND	0.74	--
	11/15/90[1]	--	--	ND	ND	ND	ND	ND	--
	02/11/91[1]	--	--	ND	ND	ND	ND	ND	--
	05/10/91	--	--	ND	ND	ND	ND	ND	--
	08/02/91	--	--	ND	ND	ND	ND	ND	--
	11/07/91	--	--	ND	ND	ND	ND	ND	--
	08/04/92	--	--	ND	ND	ND	ND	ND	--
12.57	05/03/93	6.87	5.70	--	--	--	--	--	--
	08/05/93	7.49	5.08	ND	ND	ND	ND	ND	--
11.73	11/05/93	6.98	4.75	--	--	--	--	--	--
	02/07/94	6.26	5.47	--	--	--	--	--	--
	05/02/94	6.27	5.46	--	--	--	--	--	--
	08/02/94	6.89	4.84	ND	ND	ND	ND	ND	--
	11/02/94	7.07	4.66	--	--	--	--	--	--
	02/01/95	5.17	6.56	--	--	--	--	--	--
	05/02/95	5.65	6.08	--	--	--	--	--	--
	08/03/95	6.21	5.52	ND	ND	ND	ND	ND	--
	11/06/95	6.80	4.93	--	--	--	--	--	--
	02/02/96	3.88	7.85	SAMPLED ANNUALLY		--	--	--	--
	02/07/97	4.63	7.10	SAMPLING DISCONTINUED		--	--	--	--
	02/09/98	**2.70**	**9.03**	--	--	--	--	--	--
MW-2									
	04/26/89[1]	--	--	ND	ND	ND	ND	ND	--
	08/16/89[2]	--	--	ND	ND	ND	ND	ND	--
	11/14/89[1]	--	--	ND	ND	ND	ND	ND	--
	02/16/90	--	--	ND	ND	ND	ND	ND	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) service Station #5487

28250 Hesperian Boulevard

Hayward, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				<--------		ppb			-------->
MW-2	05/16/90[1]	--	--	ND	ND	ND	ND	ND	--
(cont)	08/29/90	--	--	ND	ND	ND	ND	ND	--
	11/15/90	--	--	ND	ND	ND	ND	ND	--
	02/11/91	--	--	ND	ND	ND	ND	ND	--
	05/10/91	--	--	ND	ND	ND	ND	ND	--
	08/02/91	--	--	ND	ND	ND	ND	ND	--
	11/07/91	--	--	ND	ND	ND	ND	ND	--
	08/04/92	--	--	ND	ND	ND	ND	ND	--
12.89	05/03/93	7.30	5.59	--	--	--	--	--	--
	08/05/93	7.97	4.92	ND	ND	ND	ND	ND	--
12.58	11/05/93	7.97	4.61	--	--	--	--	--	--
	02/07/94	7.09	5.49	--	--	--	--	--	--
	05/02/94	7.23	5.35	--	--	--	--	--	--
	08/02/94	7.87	4.71	ND	ND	ND	ND	ND	--
	11/02/94	7.98	4.60	--	--	--	--	--	--
	02/01/95	6.13	6.45	--	--	--	--	--	--
	05/02/95	7.04	5.54	--	--	--	--	--	--
	08/03/95	7.19	5.39	ND	ND	ND	ND	ND	--
	11/06/95	7.80	4.78	--	--	--	--	--	--
	02/02/96	5.91	6.67	SAMPLED ANNUALLY		--	--	--	--
	02/07/97	5.65	6.93	SAMPLING DISCONTINUED		--	--	--	--
	02/09/98	**3.63**	**8.95**	--	--	--	--	--	--
MW-3									
	04/26/89[1]	--	--	ND	ND	ND	ND	ND	--
	08/16/89	--	--	ND	ND	ND	ND	ND	--
	11/14/89	--	--	ND	ND	ND	ND	ND	--
	02/16/90	--	--	ND	ND	ND	ND	ND	--
	05/16/90	--	--	ND	ND	ND	ND	ND	--
	08/29/90	--	--	ND	ND	0.52	ND	ND	--
	11/15/90	--	--	ND	ND	ND	ND	ND	--
	02/11/91	--	--	ND	ND	ND	ND	ND	--
	05/10/91	--	--	ND	ND	ND	ND	ND	--
	08/02/91	--	--	ND	ND	ND	ND	ND	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) service Station #5487

28250 Hesperian Boulevard

Hayward, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				<----------ppb---------->					
MW-3	11/07/91	--	--	ND	ND	ND	ND	ND	--
(cont)	08/04/92	--	--	ND	ND	ND	ND	ND	--
12.46	05/03/93	6.82	5.64	--	--	--	--	--	--
	08/05/93	7.50	4.96	--	--	--	--	--	--
11.99	11/05/93	7.35	4.64	--	--	--	--	--	--
	02/07/94	6.58	5.41	--	--	--	--	--	--
	05/02/94	6.62	5.37	--	--	--	--	--	--
	08/02/94	7.24	4.75	ND	ND	ND	ND	ND	--
	11/02/94	7.42	4.57	--	--	--	--	--	--
	02/01/95	5.55	6.44	--	--	--	--	--	--
	05/02/95	5.70	6.29	--	--	--	--	--	--
	08/03/95	6.59	5.40	ND	ND	ND	ND	ND	--
	11/06/95	7.20	4.79	--	--	--	--	--	--
	02/02/96	4.08	7.91	SAMPLED ANNUALLY		--	--	--	--
	02/07/97	5.04	6.95	SAMPLING DISCONTINUED		--	--	--	--
	02/09/98	**3.11**	**8.88**	--	--	--	--	--	--
MW-4									
	04/26/89[1]	--	--	ND	0.33	ND	ND	ND	--
	08/16/89	--	--	ND	ND	ND	ND	ND	--
	11/14/89	--	--	ND	ND	ND	ND	ND	--
	02/16/90	--	--	ND	ND	ND	ND	ND	--
	05/16/90	--	--	ND	ND	ND	ND	ND	--
	08/29/90	--	--	ND	ND	ND	ND	ND	--
	11/15/90	--	--	ND	ND	ND	ND	ND	--
	02/11/91	--	--	ND	ND	ND	ND	ND	--
	05/10/91	--	--	ND	ND	ND	ND	ND	--
	08/02/91	--	--	ND	ND	ND	ND	ND	--
	11/07/91	--	--	ND	ND	ND	ND	ND	--
	08/04/92	--	--	ND	ND	ND	ND	ND	--
12.09	05/03/93	6.60	5.49	--	--	--	--	--	--
	08/05/93	7.28	4.81	ND	ND	ND	ND	ND	--
11.58	11/05/93	7.07	4.51	--	--	--	--	--	--
	02/07/94	6.21	5.37	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) service Station #5487

28250 Hesperian Boulevard

Hayward, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				<----------ppb---------->					
MW-4	05/02/94	6.32	5.26	--	--	--	--	--	--
(cont)	08/02/94	6.95	4.63	ND	ND	ND	ND	ND	--
	11/02/94	7.13	4.45	SAMPLED ANNUALLY		--	--	--	--
	02/01/95	5.23	6.35	--	--	--	--	--	--
	05/02/95	5.43	6.15	--	--	--	--	--	--
	08/03/95	6.33	5.25	ND	ND	ND	ND	ND	--
	11/06/95	6.90	4.68	--	--	--	--	--	--
	02/02/96	3.71	7.87	--	--	--	--	--	--
	02/07/97	4.46	7.12	SAMPLING DISCONTINUED		--	--	--	--
	02/09/98	**2.55**	**9.03**	--	--	--	--	--	--
MW-5									
	04/26/89[1]	--	--	ND	ND	ND	ND	ND	--
	08/16/89	--	--	4,400	1,400	84	200	950	--
	08/31/89	--	--	910	120	7.1	50	53	--
	11/14/89	--	--	73	4.7	0.97	2.9	16	--
	02/16/90	--	--	ND	ND	ND	ND	ND	--
	05/16/90	--	--	1,100	310	2.8	70	110	--
	08/29/90	--	--	ND	0.70	ND	0.57	1.1	--
	11/15/90	--	--	ND	ND	ND	ND	0.47	--
	02/11/91	--	--	58	23	ND	2.9	1.3	--
	05/10/91	--	--	ND	ND	ND	ND	ND	--
	08/02/91	--	--	100	43	0.33	12	5.2	--
	11/07/91	--	--	700	43	1.7	29	24	--
	02/05/92	--	--	120	20	ND	4.4	4.7	--
	05/05/92	--	--	170	45	0.48	9.0	6.8	--
	08/04/92	--	--	80	13	ND	4.5	6.9	--
	11/05/92	--	--	120	16	ND	3.5	3.0	--
	02/02/93	--	--	77[3]	5.0	ND	1.2	1.3	--
11.18	05/03/93	6.16	5.02	260	35	ND	2.3	3.1	--
	08/05/93	6.97	4.21	530	210	0.62	54	44	--
10.79	11/05/93	6.81	3.98	110	12	ND	2.3	2.3	--
	02/07/94	5.70	5.09	180	22	ND	6.4	5.9	--
	05/02/94	5.96	4.83	170[3]	38	0.73	8.5	8.4	--

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) service Station #5487

28250 Hesperian Boulevard

Hayward, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				<--------		ppb			-------->
MW-5	08/02/94	6.68	4.11	59	16	ND	2.4	3.1	--
(cont)	11/02/94	6.86	3.93	450	73	1.6	6.2	11	--
	02/01/95	4.85	5.94	170	11	ND	2.4	3.9	--
	05/02/95	4.95	5.84	ND	7.5	0.51	1.2	1.6	--
	08/03/95	6.03	4.76	ND	12	ND	0.70	ND	--
	11/06/95	6.70	4.09	160	80	ND	7.4	10	120
	02/02/96	3.50	7.29	64	20	ND	3.9	6.1	150
	02/07/97	4.26	6.53	85	16	0.56	1.7	3.8	250
	02/09/98	**2.29**	**8.50**	**220**	**54**	**ND**	**3.2**	**5.9**	**230**
MW-6	08/04/92	--	--	540	12	7.9	35	110	--
	11/05/92	--	--	300	16	2.3	14	14	--
	02/02/93	--	--	400[3]	66	5.5	32	13	--
11.47	05/03/93	6.28	5.19	520	47	2.6	33	48	--
	08/05/93	7.05	4.42	230	25	1.6	12	29	--
11.18	11/05/93	7.02	4.16	100	1.8	ND	0.79	2.2	--
	02/07/94	6.00	5.18	1,100	130	14	13	130	--
	05/02/94	6.18	5.00	440[3]	20	4.2	11	26	--
	08/02/94	6.88	4.30	220	13	1.0	12	28	--
	11/02/94	7.05	4.13	840	30	2.5	26	57	--
	02/01/95	5.04	6.14	340	26	0.77	2.6	7.0	--
	05/02/95	5.00	6.18	ND	5.7	ND	0.81	1.1	--
	08/03/95	6.26	4.92	ND	0.76	ND	ND	ND	--
	11/06/95	6.87	4.31	210	17	0.66	14	37	130
	02/02/96	3.64	7.54	300	51	0.65	30	18	280
	02/07/97	4.41	6.77	66	5.8	1.2	2.1	6.6	450
	02/09/98	**2.51**	**8.67**	**ND[5]**	**1.0**	**ND[5]**	**ND[5]**	**ND[5]**	**450**
MW-7									
	07/30/96	--	--	ND	ND	ND	ND	ND	ND
9.39	02/07/97	3.75	5.64	ND	ND	ND	ND	ND	ND
	02/09/98	**1.69**	**7.70**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) service Station #5487

28250 Hesperian Boulevard

Hayward, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (msl)	TPH(G)	B	T	E	X	MTBE
				<----------ppb---------->					
MWD[4]	05/10/91	--	--	ND	ND	ND	ND	ND	--
Trip Blank									
TB-LB	**02/09/98**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to February 9, 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
ppm = Parts per million
ND = Not Detected
-- = Not Measured/Not Analyzed
TOG = Total Oil and Grease

* Prior to November 5, 1993, the elevations of the *Top of Well Covers* have been surveyed relative to Mean Sea Level (msl), per the City of Hayward Benchmark (Elevation = 10.97 feet, msl). TOC elevations are relative to Mean Sea Level (msl), per the City of Hayward Benchmark (Elevation = 10.97 feet msl).

1 TPH(D), TOG and all EPA Method 8010 constituents were ND.
2 TOG for the samples collected from MW-1 and MW-2 were 23 ppm and 7.4 ppm, respectively. TPH(D) and all EPA Method 8010 constituents were ND for both samples.
3 Laboratory report indicates that the hydrocarbons detected appear to be a gasoline and non-gasoline mixture.
4 MWD was a quality assurance duplicate water sample collected from well MW-5.
5 Detection limit raised. Refer to analytical results.

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 or equivalent. 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, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured 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.

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 # 5487 Job#: 180041

Address: 28250 Hesperian Date: 2-9-98

City: Hayward Sampler: Joe

Well ID MW-1 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 27.20[redacted] ft.

Depth to Water 2.70 ft.

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

____ X VF ____ = ____ X 3 (case volume) = Estimated Purge Volume: ____ (gal.)

Purge Equipment: Disposable Bailer, Bailer, Stack, Suction, Grundfos, Other: ____

Sampling Equipment: Disposable Bailer, Bailer, Pressure Bailer, Grab Sample, Other: ____

Starting Time: ____ Weather Conditions: ____

Sampling Time: ____ Water Color: ____ Odor: ____

Purging Flow Rate: ____ gpm. Sediment Description: ____

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: Monitored only

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5487 Job#: 180041

Address: 28250 Hesperian Date: 2-9-98

City: Hayward Sampler: _____

Well ID MW-2 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: _____ in. Amount Bailed (product/water): _____ (gal.)

Total Depth 23.80 ft.

Depth to Water 3.63 ft.

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

_____ X VF _____ = _____ X 3 (case volume) = Estimated Purge Volume: _____ (gal.)

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

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

Starting Time: _____ Weather Conditions: _____

Sampling Time: _____ Water Color: _____ Odor: _____

Purging Flow Rate: _____ gpm. Sediment Description: _____

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: Monitored only

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5487 Job#: 180041

Address: 28250 Hesperian Date: 2-9-98

City: Hayward Sampler: Joe

Well ID MW-3 Well Condition: O.K

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 24.40 ft.

Depth to Water 3.11 ft.

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

____ X VF ____ = ____ X 3 (case volume) = Estimated Purge Volume: ____ (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- Suction
- Grundfos
- Other: ____

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

Starting Time: ____ Weather Conditions: ____

Sampling Time: ____ Water Color: ____ Odor: ____

Purging Flow Rate: ____ gpm. Sediment Description: ____

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: Monitored only

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5487 Job#: 180041

Address: 28250 Hesperian Date: 2-9-98

City: Hayward Sampler: JC

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

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 24.55 ft.

Depth to Water 2.55 ft.

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

____ X VF ____ = ____ X 3 (case volume) = Estimated Purge Volume: ____ (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- Stack
- Suction
- Grundfos
- Other: ____

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

Starting Time: ____ Weather Conditions: ____

Sampling Time: ____ Water Color: ____ Odor: ____

Purging Flow Rate: ____ gpm. Sediment Description: ____

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES

COMMENTS: Monitored only. Replaced padlock

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5487 Job#: 180041

Address: 28250 Hesperian Date: 2-9-98

City: Hayward Sampler: Joe

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

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 24.15 ft.

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

Depth to Water 2.29 ft.

21.86 X VF 0.17 = 3.72 X 3 (case volume) = Estimated Purge Volume: 12 (gal.)

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

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

Starting Time: 11:00 Weather Conditions: Clear

Sampling Time: 11:27 A.m Water Color: Clear Odor: faint

Purging Flow Rate: 1 gpm. Sediment Description: None

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm X100	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:08	0	7.13	3.80	69.2			
11:12	4	7.19	4.05	69.5			
11:16	8	7.20	4.06	70.2			
11:20	12	7.18	4.07	70.1			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	3 VOA	Y	HCL	SEQ	TPHG, BTEX, MTBE

COMMENTS: Replaced pad lock -

9/97-fieldat.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5487 Job#: 180041

Address: 28250 Hesperian Date: 2-9-98

City: Hayward Sampler: JVC

Well ID MW-6 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 18.00 ft.

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

Depth to Water 2.51 ft.

15.49 X VF 0.17 = 2.63 X 3 (case volume) = Estimated Purge Volume: 8 (gal.)

Purge Equipment: Disposable Bailer; Bailer; Stack; Suction; Grundfos; Other: ____

Sampling Equipment: Disposable Bailer; ~~Bailer~~; Pressure Bailer; Grab Sample; Other: ____

Starting Time: 10:22 Weather Conditions: Clear

Sampling Time: 10:45 A.M Water Color: clear Odor: ~~None~~ Considerable

Purging Flow Rate: 1 gpm. Sediment Description: None

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm X100	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:25	0	7.39	4.66	70.5			
10:30	2.5	7.27	4.82	70.4			
10:32	6	7.25	4.69	70.4			
10:34	8	7.25	4.82	70.4			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 VOA	Y	HCL	SEQ.	TPHG, BTEX, MTBE

COMMENTS: ____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5487 Job#: 180041

Address: 28250 Hesperian Date: 2-9-98

City: Hayward Sampler: Joe

Well ID MW-7 Well Condition: O.K.

Well Diameter 2 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 19.14 ft.

Depth to Water 1.69 ft.

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

17.45 X VF 0.17 = 2.97 X 3 (case volume) = Estimated Purge Volume: 9 (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: 10:10 A.M. Water Color: Clear Odor: None

Purging Flow Rate: 0.9 gpm. Sediment Description: None

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm x100	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
9:50	0	7.95	7.38	70.5			
9:53	3	7.52	7.40	70.6			
9:57	6	7.50	7.45	70.3			
10:00	9	7.46	7.47	70.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	3 VOA	Y	HCl	SEQ.	TPHG, BTEX, MTBE

COMMENTS: Replaced pad lock -

Chain-of-Custody-Record

TOSCO

Tosco Marketing Company
2000 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number: Unocal SS #5487
Facility Address: 28250 Hesperian Blvd., Hayward, CA
Consultant Project Number: 180041.85
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): Ms. Tina R. Berry
(Phone): (510) 277-2321
Laboratory Name: Sequoia Analytical
Laboratory Release Number:
Samples Collected by (Name): Joe Ajemian
Collection Date: 2-9-98
Signature:

9802485

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)					DO NOT BILL TB-LB ANALYSIS Remarks
TB-LB	1	1 VOA	W	—	—		Yes	✓												
MW-5	2	3 VOA	W	G	11:27 A.M		"	✓												
MW-6	3	"	"	"	10:45 A.M		"	✓												
MW-7	4	"	"	"	10:10 A.M		"	✓												

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	2-9-98 1:30 PM			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
					2/11/98 1:30 PM

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 940 (650) 364-9600 FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Gettler Ryan/Geostrategies	Client Proj. ID: [illegible]-Unocal SS#5487, 180041.85	Sampled: 02/09/98
6747 Sierra Court Suite J	Sample Descript: TB-LB-1, CONTRACTORS	Received: 02/09/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/17/98
Attention: Deanna Harding	Lab Number: 9802485-01	Reported: 02/24/98

QC Batch Number: GC021798802002A
Instrument ID: GCHP02

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	117

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 940[illegible], (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Gettler Ryan/Geostrategies	Client Proj. ID: Unocal SS#5487, 180041.85	Sampled: 02/09/98
6747 Sierra Court Suite J	Sample Descript: MW-5	Received: 02/09/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/17/98
Attention: Deanna Harding	Lab Number: 9802485-02	Reported: 02/24/98

QC Batch Number: GC021798802002A
Instrument ID: GCHP02

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**220**
Methyl t-Butyl Ether	**2.5**	**230**
Benzene	**0.50**	**54**
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**3.2**
Xylenes (Total)	**0.50**	**5.9**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	144 Q

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 9406 (650) 364-9600 FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Gettler Ryan/Geostrategies	Client Proj. ID: Unocal SS#5487, 180041.85	Sampled: 02/09/98
6747 Sierra Court Suite J	Sample Descript: MW-6	Received: 02/09/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/17/98
Attention: Deanna Harding	Lab Number: 9802485-03	Reported: 02/24/98

QC Batch Number: GC021798802002A
Instrument ID: GCHP02

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	100	N.D.
Methyl t-Butyl Ether	**5.0**	**450**
Benzene	**1.0**	**1.0**
Toluene	1.0	N.D.
Ethyl Benzene	1.0	N.D.
Xylenes (Total)	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	117

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal SS#5487, 180041.85	Sampled: 02/09/98
6747 Sierra Court Suite J	Sample Descript: MW-7	Received: 02/09/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/17/98
Attention: Deanna Harding	Lab Number: 9802485-04	Reported: 02/24/98

QC Batch Number: GC021798802002A
Instrument ID: GCHP02

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	118

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

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819 Striker Avenue, Suite 8, Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Gettler Ryan/Geostrategies	Client Proj. ID: Unocal SS#5487, 180041.85	Received: 02/09/98
6747 Sierra Court Suite J		
Dublin, CA 94568	Lab Proj. ID: 9802485	Reported: 02/24/98
Attention: Deanna Harding		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 7 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

#Q - Surrogate coelution was confirmed.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal SS#5487, 180041.85
Matrix: Liquid
Work Order #: 9802485 -01-05

Reported: Feb 24, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC021798802002A	GC021798802002A	GC021798802002A	GC021798802002A	GC021798802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill
MS/MSD #:	8020817	8020817	8020817	8020817	8020817
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/17/98	2/17/98	2/17/98	2/17/98	2/17/98
Analyzed Date:	2/17/98	2/17/98	2/17/98	2/17/98	2/17/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	360 µg/L
Result:	20	20	21	63	290
MS % Recovery:	100	100	105	105	81
Dup. Result:	22	22	24	81	350
MSD % Recov.:	110	110	120	135	97
RPD:	9.5	9.5	13	25	19
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS021798	LCS021798	LCS021798	LCS021798	LCS021798
Prepared Date:	2/17/98	2/17/98	2/17/98	2/17/98	2/17/98
Analyzed Date:	2/17/98	2/17/98	2/17/98	2/17/98	2/17/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	360 µg/L
LCS Result:	21	21	20	65	350
LCS % Recov.:	105	105	100	108	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL
Elap #1271

Mike Gregory
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.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference