RO29

GETTLER-RYAN INC.

TRANSMITTAL

TO: Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

DATE: June 12, 1998
G-R #: 180061

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

RE: Tosco (Unocal) SS #5325
3220 Lakeshore Avenue
Oakland, California

98 JUN 17 PM 2:54

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	June 5, 1998	Groundwater Monitoring and Sampling Report First Quarter 1998 - Event of March 3, 1998

COMMENTS:

At the request of Tosco Marketing Company, we are providing you a copy of the above referenced report. The site is monitored and sampled on a quarterly basis. If you have questions please contact the Tosco Project Manager, Ms. Tina R. Berry at (925) 277-2321.

Enclosure

cc: Mr. Greg Gurss, Gettler-Ryan Inc., Rancho Cordova, CA 95670

agency/5325trb.qmt

GETTLER-RYAN INC.

June 5, 1998
G-R Job #180061

Ms. Tina R. Berry
Tosco Marketing Company
2000 Crow Canyon Place, Suite 200
San Ramon, California 94583

RE: First Quarter 1998 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

Dear Ms. Berry:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On March 3, 1998, field personnel monitored six wells (U-1 through U-6) and sampled five wells (U-2 through U-6) 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 present in one well (U-1). 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 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 Tables 1 and 2. Dissolved Oxygen Concentrations are summarized in Table 3. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical reports are also attached.

Sincerely,

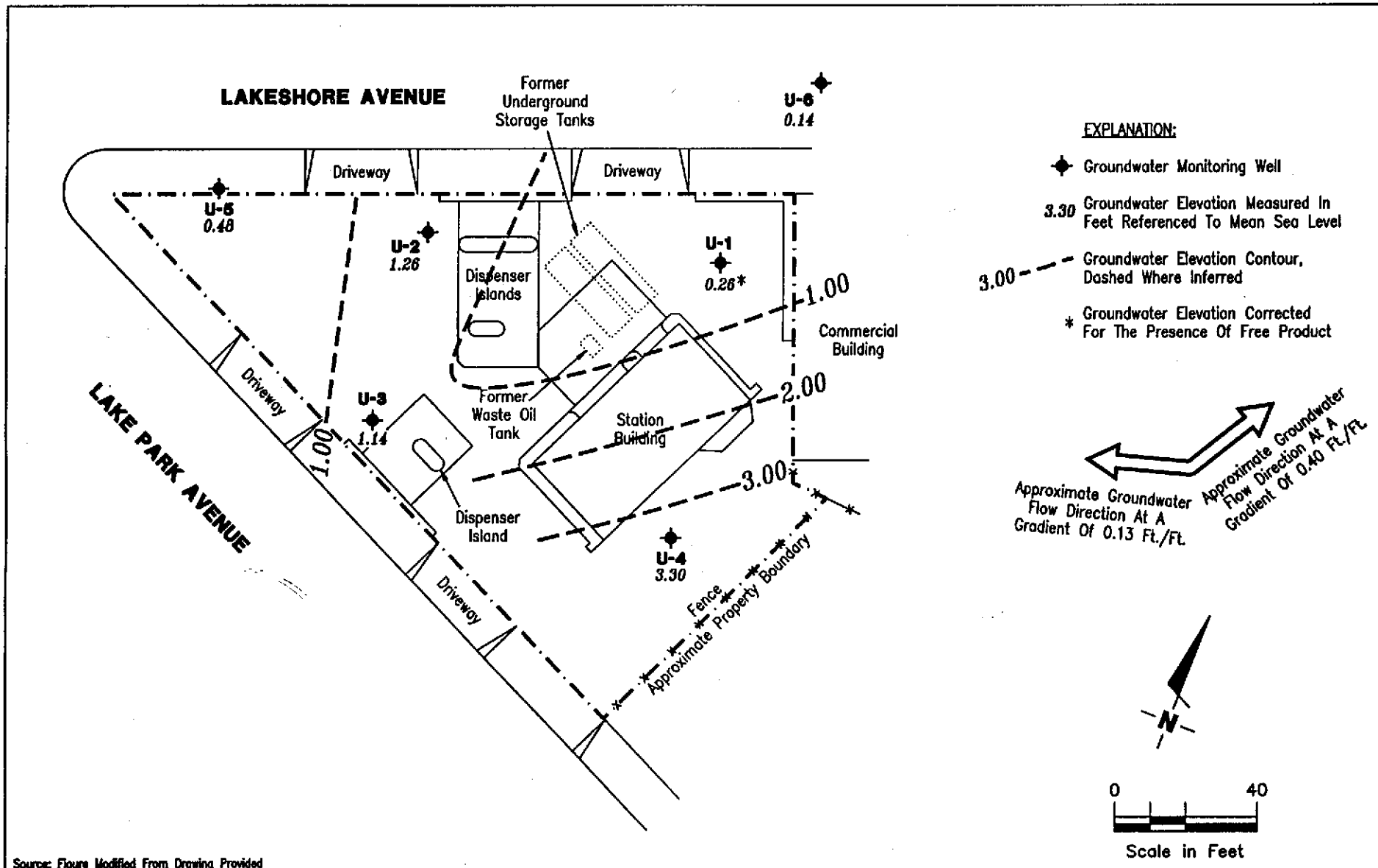
Deanna L. Harding
Project Coordinator

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: Groundwater Analytical Results
Table 3: Dissolved Oxygen Concentrations
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

5325.qml



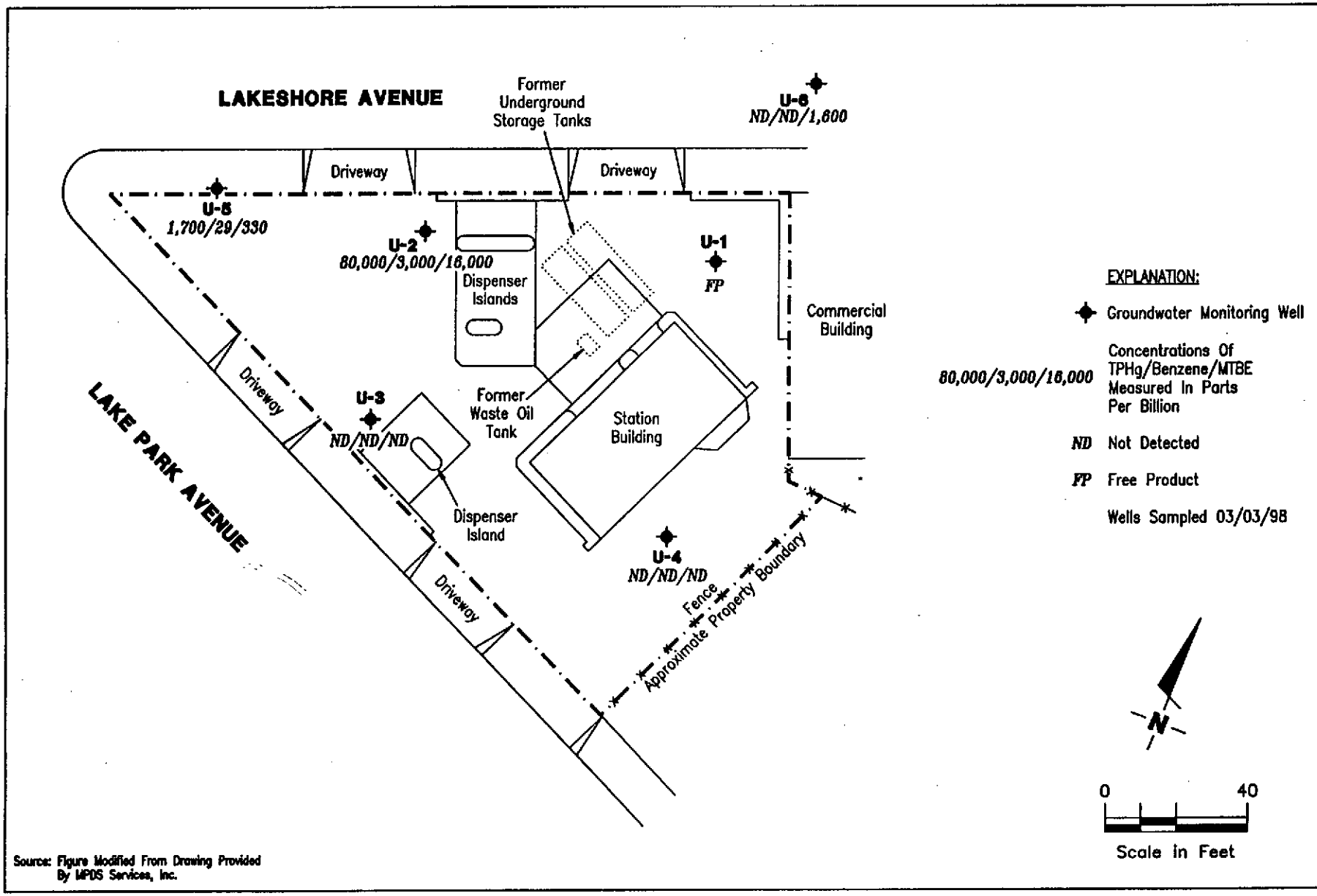
Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Tosco (Unocal) Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California

FIGURE 1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180061		March 3, 1998	



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

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CONCENTRATION MAP
Tosco (Unocal) Service Station No. 5325
3220 Lakeshore Avenue
Oakland, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180061		March 3, 1998	

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G)	B	T	E	X	MTBE
					<----------		ppb			---------->
U-1	08/10/90				690	38	75	8.6	130	--
	01/07/91				250	22	16	4.2	17	--
	04/01/91				160	13	8.6	1.0	15	--
	07/03/91				140	21	4.3	0.36	17	--
	10/09/91				ND	ND	ND	ND	ND	--
	02/12/92				250	ND	ND	ND	ND	--
	05/05/92				230	1.2	ND	ND	ND	--
	06/11/92				1,000	80	1.4	6.7	41	--
	08/20/92				400[1]	1.0	ND	ND	0.6	--
	02/22/93				34,000	1,400	5,500	910	7,300	--
	05/07/93				8,700	600	240	650	3,300	--
	08/08/93				4,900[2]	79	ND	832	270	--
	11/16/93				690[3]	ND	ND	ND	ND	--
	02/16/94				6,800[4]	ND	ND	ND	ND	--
	06/22/94				200	ND	ND	5.9	21	--
	09/22/94				6,100[3]	ND	ND	ND	ND	--
	12/24/94				50,000	2,500	9,700	2,400	17,000	--
	03/25/95				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/21/95				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/95				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/18/96				27,000	ND	2,300	1,400	11,000	4,900
	06/27/96				120,000	540	4,300	2,600	26,000	ND
	09/26/96				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/09/96				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/19/96				NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
8.46	03/14/97	9.02	-0.15**	0.55	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/30/97	8.41	0.07**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/97	8.56	-0.08**	0.02	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/12/97	8.58	-0.11**	0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/03/98	**8.23**	**0.26****	**0.04**	**NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT**				**--**	**--**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
U-2	08/10/90				780	27	46	15	130	--
	01/07/91				1,900	67	5.8	58	69	--
	04/01/91				1,700	250	89	34	190	--
	07/03/91				2,100	150	25	3.1	290	--
	10/09/91				230	7.1	ND	ND	11	--
	02/12/92				410	1.9	ND	0.36	0.4	--
	05/05/92				1,600	120	52	6.2	290	--
	06/11/92				620	17	2.1	ND	37	--
	08/20/92				700	28	6.5	1.3	4.6	--
	02/22/93				3,400	2,400	2,100	1,200	5,800	--
	05/07/93				17,000	1,800	660	1,700	4,000	--
	08/08/93				5,600[2]	420	ND	410	670	--
	11/16/93				510[3]	ND	ND	ND	ND	--
	02/16/94				980[4]	49	13	2.7	40	--
	06/22/94				31,000	2,200	62	1,500	3,500	--
	09/22/94				8,500[3]	29	ND	ND	ND	--
	12/24/94				32,000	1,500	890	1,300	5,000	--
	03/25/95				170,000	1,900	21,000	4,800	33,000	--
	06/21/95				16,000	2,100	ND	1,800	1,700	--
	09/19/95				3,000	610	ND	78	240	--[5]
	12/19/95				1,600	140	55	52	270	--[6]
	03/18/96				12,000	2,200	ND	1,200	2,200	22,000
	06/27/96				28,000	3,400	ND	2,800	3,100	3,000
	09/26/96				5,900	750	ND	ND	ND	18,000
	12/09/96				13,000	5,100	290	980	370	2,700
7.62	03/14/97	7.12	0.52**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	06/30/97	6.19	1.43	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	09/19/97	7.31	0.31	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	12/12/97	6.75	0.88**	<0.01	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				--	--
	03/03/98	**6.36**	**1.26**	**Sheen**	**80,000**	**3,000**	**1,100**	**820**	**16,000**	**16,000**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
U-3	08/10/90				ND	ND	ND	ND	ND	--
	01/07/91				ND	ND	ND	ND	1.8	--
	04/01/91				ND	1.0	2.9	0.53	5.4	--
	07/03/91				ND	ND	ND	ND	ND	--
	10/09/91				ND	ND	ND	ND	ND	--
	02/12/92				ND	ND	ND	ND	ND	--
	05/05/92				ND	ND	ND	ND	ND	--
	06/11/92				ND	ND	ND	ND	ND	--
	08/20/92				ND	ND	ND	ND	ND	--
	02/22/93				ND	ND	ND	ND	ND	--
	05/07/93				ND	ND	ND	ND	ND	--
	08/08/93				210	5.0	9.7	0.7	4.1	--
	11/16/93				ND	ND	ND	ND	ND	--
	02/16/94				ND	ND	ND	ND	ND	--
	06/22/94				ND	ND	ND	ND	ND	--
	09/22/94				ND	ND	ND	ND	ND	--
	12/24/94				ND	ND	ND	ND	ND	--
	03/25/95				ND	ND	ND	ND	ND	--
	06/21/95				ND	ND	ND	ND	ND	--
	09/19/95				ND	ND	ND	ND	ND	--[5]
	12/19/95				ND	ND	ND	ND	ND	--
	03/18/96				ND	ND	ND	ND	ND	--
	06/27/96				440	49	50	51	140	50
	09/26/96				ND	ND	ND	ND	ND	ND
	12/09/96				ND	ND	ND	ND	ND	29
10.98	03/14/97	10.87	0.11	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	11.08	-0.10	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	11.05	-0.07	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	10.58	0.40	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	**9.84**	**1.14**	**0.00**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G)	B	T	E	X	MTBE
					<		ppb			>
U-4	06/22/94				ND	ND	ND	ND	ND	--
	09/22/94				ND	0.78	1.3	ND	1.4	--
	12/24/94				ND	ND	ND	ND	ND	--
	03/25/95				ND	ND	ND	ND	ND	--
	06/21/95				ND	ND	ND	ND	ND	--
	09/19/95				ND	ND	ND	ND	ND	--
	12/19/95				ND	ND	ND	ND	ND	--
	03/18/96				ND	ND	ND	ND	ND	--
	06/27/96				ND	ND	ND	ND	ND	ND
	09/26/96				ND	ND	ND	ND	ND	ND
	12/09/96				ND	ND	ND	ND	ND	33
11.15	03/14/97	9.35	1.80	0.00	ND	ND	ND	ND	ND	ND
	06/30/97	9.89	1.26	0.00	ND	ND	ND	ND	ND	ND
	09/19/97	9.96	1.19	0.00	ND	ND	ND	ND	ND	ND
	12/12/97	8.56	2.59	0.00	ND	ND	ND	ND	ND	ND
	03/03/98	**7.85**	**3.30**	**0.00**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
U-5	06/22/94				210	7.1	13	4.5	26	--
	09/22/94				170	8.4	10	8.5	18	--
	12/24/94				8,700	560	70	670	430	--
	03/25/95				44,000	390	960	1,500	7,600	--
	06/21/95				400	2.3	ND	9.1	3.5	--
	09/19/95				850	14	7.1	13	66	--[5]
	12/19/95				ND	ND	ND	ND	ND	--
	03/18/96				100	0.67	0.5	0.51	5.4	--
	06/27/96				16,000	280	150	1,400	4,600	530
	09/26/96				ND	ND	0.57	ND	0.96	ND
	12/09/96				1,300	29	46	ND	140	97
6.98	03/14/97	6.99	-0.01	0.00	ND	ND	ND	ND	ND	14
	06/30/97	7.08	-0.10	0.00	4,200	74	51	180	980	270

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

Well ID/ TOC*	Date	DTW (ft.)	GWE (ft.)	Product Thickness (ft.)	TPH(G)	B	T	E	X	MTBE
					<--------		ppb			-------->
U-5	09/19/97	6.78	0.20	0.00	6,300	160	13	370	1000	480
(cont)	12/12/97	6.94	0.04	0.00	60	1.3	ND	1.6	2.1	47
	03/03/98	**6.50**	**0.48**	**0.00**	**1,700**	**29**	**ND[7]**	**150**	**190**	**330**
U-6	06/22/94				ND	ND	ND	ND	ND	--
	09/22/94				130	1.3	0.8	ND	0.73	--
	12/24/94				6,900	500	59	600	380	--
	03/25/95				47,000	450	1,300	1,700	8,200	--
	06/21/95				ND	ND	ND	ND	ND	--
	09/19/95				ND	ND	ND	ND	ND	--[5]
	12/19/95				210	2.5	1.0	2.9	17	--
	03/18/96				ND	ND	ND	ND	ND	--
	06/27/96				ND	ND	ND	ND	ND	510
	09/26/96				ND	ND	ND	ND	ND	1,400
	12/09/96				1,200	29	48	6.4	140	58
7.14	03/14/97	7.30	-0.16	0.00	ND	ND	ND	ND	ND	1,500
	06/30/97	7.35	-0.21	0.00	ND	ND	ND	ND	ND	990
	09/19/97	7.25	-0.11	0.00	ND	ND	ND	ND	ND	1,400
	12/12/97	7.29	-0.15	0.00	ND	ND	ND	ND	ND	680
	03/03/98	**7.00**	**0.14**	**0.00**	**ND**	**ND**	**ND**	**ND**	**ND**	**1,600**
Trip Blank										
TB-LB	**03/03/98**	**--**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 1

Groundwater Monitoring Data and Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to March 3, 1998, were provided by MPDS Services, Inc.

TOC = Top of Casing	B = Benzene	ppb = Parts per billion
DTW = Depth to Water	T = Toluene	ppm = Parts per million
(ft.) = Feet	E = Ethylbenzene	ND = Not Detected
GWE = Groundwater Elevation	X = Xylenes	-- = Not Measured/Not Analyzed
TPH(G) = Total Petroleum Hydrocarbons as Gasoline	MTBE = Methyl tertiary butyl ether	

* TOC elevations are surveyed relative to City of Oakland Benchmark, at the northeasterly corner of Weller and Cheney Avenue (Elevation = 9.055 feet, city datum; add 3.00' to U.S.G.S. datum).

** Groundwater elevation corrected due to the presence of free product (correction factor = [(TOC-DTW)+(Product Thickness x 0.75)].

1 The positive result for gasoline does not appear to have a typical gasoline pattern.

2 The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.

3 Laboratory report indicates that the hydrocarbons detected did not appear to be gasoline

4 Laboratory report indicates that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

5 Laboratory has potentially identified the presence of MTBE at reportable levels in the groundwater sample collected from this well.

6 Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 ppm in the sample collected from this well.

7 Detection limit raised. Refer to analytical results.

Depth to water and groundwater elevation history will be updated in future reports.

Table 2

Groundwater Analytical Results

Tosco (Unocal) Service Station #5325
3220 Lakeshore Avenue
Oakland, California

Well ID	Date	Iron (ppm)	Nitrate as NO3 (ppm)	Phosphate as PO4 (ppm)	Redox Potential (ppm)
U-2	**03/03/98**	**25**	**ND**	**ND**	**3.69 (mV)**
U-3	06/30/97	1.4	21	0.86	190
	09/19/97	0.57	19	ND	75
	12/12/97	1.9	23	0.85	390
	03/03/98	**0.013**	**36**	**ND**	**3.58 (mV)**
U-4	06/30/97	0.13	35	0.52	200
	09/19/97	0.35	30	ND	45
	12/12/97	0.68	31	0.73	380
	03/03/98	**0.018**	**3.2**	**ND**	**2.84 (mV)**
U-5	06/30/97	16	ND	ND	160
	09/19/97	0.22	ND	ND	63
	12/12/97	6.7	ND	ND	400
	03/03/98	**18**	**3.1**	**ND**	**3.45 (mV)**
U-6	06/30/97	88	0.80	ND	190
	09/19/97	2.9	1.80	ND	ND
	12/12/97	51	ND	ND	380
	03/03/98	**60**	**3.5**	**ND**	**3.27 (mV)**

EXPLANATIONS:

Groundwater analytical results prior to March 3, 1998, were provided by MPDS Services, Inc.

ppm = Parts per million
ND = Not Detected
-- = Not Analyzed
mV = millivolts

Table 3

Dissolved Oxygen Concentrations

Tosco (Unocal) Service Station #5325

3220 Lakeshore Avenue

Oakland, California

Well ID	Date	Dissolved Oxygen *(mg/L)*
U-3	06/30/97	4.1
	09/19/97	4.2
	12/12/97	2.97
	03/03/98	**2.63**
U-4	06/30/97	5.4
	09/19/97	5.1
	12/12/97	3.11
	03/03/98	**2.94**
U-5	06/30/97	3.4
	09/19/97	0.6
	12/12/97	1.75
	03/03/98	**2.36**
U-6	06/30/97	0.30
	09/19/97	0.60
	12/12/97	2.70
	03/03/98	**2.18**

EXPLANATIONS:

Dissolved Oxygen Concentrations prior to March 3, 1998, were provided by MPDS Services, Inc.

mg/L = milligrams per Liter

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 # 5325 Job#: 180061

Address: 3220 Lakeshore Ave. Date: 3-3-98

City: Oakland Sampler: Joe

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

Well Diameter 3 in. Hydrocarbon Thickness: 0.04 in. Amount Bailed (product/water): 1g. product/water < 1 ounce product. (gal.)

Total Depth 19.70 ft.

Depth to Water 8.23 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: Strong

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: Well had product and wasn't sampled. Well has a skimmer.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5325 Job#: 180061

Address: 3220 Lakeshore Ave. Date: 3-3-98

City: Oakland Sampler: Joe

Well ID U-2 Well Condition: ok.

Well Diameter 3 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 19.65 ft.

Depth to Water 6.36 ft.

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

13.29 X VF 0.38 = 5.05 X 3 (case volume) = Estimated Purge Volume: 15 (gal.)

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

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

Starting Time: 10:45 Weather Conditions: clear

Sampling Time: 11:25 A.m Water Color: ~~dark~~ Semi-clear Odor: Yes

Purging Flow Rate: 1.3 gpm Sediment Description: None

Did well de-water? Yes If yes; Time: 11:05 Volume: @ 11 (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm x100	Temperature ~~C~~ F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:58	5	7.90	2.31	69.5		369	
11:03	10	7.63	2.87	70.0			
11:18	15	7.54	2.90	71.0			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-2	3 voA	Y	HCL	Seq. Lab	TPHG, BTEX, MTBE
	1 plastic	"	HNO_3	"	Iron
	1 plastic	"	plain	"	Nitrate, phosphate

COMMENTS: ____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5325 Job#: 180061

Address: 3220 Lakeshore Ave. Date: 3-3-98

City: Oakland Sampler: Joe

Well ID U-3 Well Condition: 0.1C

Well Diameter 3 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 19.40 ft.

Depth to Water 9.84 ft.

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

9.56 X VF 0.38 = 3.63 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: 7:38 Weather Conditions: Cloudy

Sampling Time: 8:25 A.M Water Color: Clear Odor: None

Purging Flow Rate: 1 gpm. Sediment Description: None

Did well de-water? Yes If yes; Time: 7:51 Volume: ~~2~~ 8 (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm x1/00	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
7:45	4	6.89	4.31	70.3	2.63	358	
7:49	7	6.96	4.43	70.5			
8:10	11	7.04	4.46	70.1			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-3	3 VOA	Y	HCL	Seq Lab.	TPHG, BTEX, MTBE
"	1 plastic	Y	HNO_3	"	Iron
"	1 plastic	Y	plain	"	Nitrate, Phosphate

COMMENTS: ____

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WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5325 Job#: 180061

Address: 3220 Lakeshore Ave. Date: 3-3-98

City: Oakland Sampler: Joe

Well ID U-4 Well Condition: O.K

Well Diameter 4 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 20.15 ft.

Depth to Water 7.85 ft.

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

12.3 x VF 0.66 = 8.12 X 3 (case volume) = Estimated Purge Volume: 24 (gal.)

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

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

Starting Time: 8:35 Weather Conditions: cloudy

Sampling Time: 9:15 A.M Water Color: Clear Odor: None

Purging Flow Rate: 1.5 gpm Sediment Description: None

Did well de-water? Yes If yes; Time: 8:54 Volume: @ 18 (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm X100	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
8:43	8	7.17	5.11	70.9	2.94	284	
8:52	16	7.28	5.15	71.0			
9:08	24	7.30	5.13	70.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-4	3 VOA	Y	HCl	Seq. Lab	TPHG, BTEX, MTBE
"	1 plastic	"	HNO_3	"	Iron
"	1 plastic	"	Plain	"	Nitrate, Phosphate

COMMENTS: ____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5325 Job#: 180061

Address: 3220 Lakeshore Ave. Date: 3-3-98

City: Oakland Sampler: Joe

Well ID U-5 Well Condition: O.K

Well Diameter 4 in. Hydrocarbon Thickness: ____ in. Amount Bailed (product/water): ____ (gal.)

Total Depth 20.08 ft.

Depth to Water 6.50 ft.

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

13.58 X VF 0.66 = 8.96 X 3 (case volume) = Estimated Purge Volume: 27 (gal.)

Purge Equipment: Disposable Bailer / Bailer / Stack / ~~Suction~~ / Grundfos / Other: ____

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

Starting Time: 10:00 Weather Conditions: cloudy Strong

Sampling Time: 10:35 A.M Water Color: Clear Odor: ~~Strong~~ Musty

Purging Flow Rate: 1.5gpm 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)
10:10	9	7.50	3.86	71.1	2.36	345	
10:18	18	7.43	3.64	71.0			
10:24	27	7.39	3.71	70.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-5	3 x 40 A	Y	HCL	Seq - Lab	TPHG, BTEX, MTBE
"	1 plastic	"	HNO_3	"	Iron
"	1 plastic	"	Plain	"	Nitrate, Phosphate

COMMENTS: ____

3/97-fieldat.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 5325 Job#: 180061

Address: 3220 Lakeshore Ave. Date: 3-3-98

City: Oakland Sampler: Joe

Well ID U-6 Well Condition: O.K

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

Total Depth 23.81 ft

Depth to Water 7.00 ft

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

16.81 X VF 0.17 = 2.86 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: 9:30 Weather Conditions: cloudy

Sampling Time: 9:48 A.M Water Color: clear Odor: None

Purging Flow Rate: 1 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)
9:36	3	7.10	458	69.9	2.18	327	
9:39	6	7.11	4.51	70.4			
9:42	9	7.12	4.56	70.7			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-6	3 VOA	Y	HCL	Seq. Lab	TPHG, BTEX, MTBE
"	1 plastic	"	HNO_3	"	Iron
"	1 plastic	"	plain	"	Nitrate, Phosphate

COMMENTS: ____

Chain-of-Custody-Record

TOSCO

Tosco Marketing Company
2003 Crow Canyon Pl., Ste. 400
San Ramon, California 94583

Facility Number #5325 - Oakland
Facility Address 3220 Lakeshore Ave.
Consultant Project Number 180061
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 3-3-98
Signature

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water 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 (8015)	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)	Phosphate N. frate	Iron				DO NOT BILL TB-LB ANALYSIS Remarks
		1VOA	W	—	—	HCL	Y	✓													01
TB-LB		3VOA 2pl.	"	G	11:25 A.M	HCL HNO_3	"	✓								✓	✓				02
U-2		"	"	"	8:25 A.M	"	"	✓								✓	✓				03
U-3		"	"	"	9:15 A.M	"	"	✓								✓	✓				04
U-4		"	"	"	10:35 A.M	"	"	✓								✓	✓				05
U-5		"	"	"	9:48 A.M	"	"	✓								✓	✓				06
U-6		"	"	"																	

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	3-3-98 2:10 p.m.			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time 3/3/98 1410

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

Sequoia Analytical

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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
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Tosco 5325, 180061
Lab Proj. ID: 9803101

Sampled: 03/03/98
Received: 03/03/98
Analyzed: see below

Reported: 03/16/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9803101-02				
Sample Desc : **LIQUID,U-2**				
Iron by ICP	**mg/L**	**03/05/98**	**0.010**	**25**
Nitrate as Nitrate	mg/L	03/06/98	1.0	N.D.
Phosphate	mg/L	03/10/98	10	N.D.
Lab No: 9803101-03				
Sample Desc : **LIQUID,U-3**				
Iron by ICP	mg/L	03/05/98	0.010	0.013
Nitrate as Nitrate	**mg/L**	**03/07/98**	**1.0**	**36**
Phosphate	mg/L	03/10/98	1.0	N.D.
Lab No: 9803101-04				
Sample Desc : **LIQUID,U-4**				
Iron by ICP	mg/L	03/05/98	0.010	0.018
Nitrate as Nitrate	**mg/L**	**03/07/98**	**1.0**	**3.2**
Phosphate	mg/L	03/10/98	10	N.D.
Lab No: 9803101-05				
Sample Desc : **LIQUID,U-5**				
Iron by ICP	**mg/L**	**03/05/98**	**0.010**	**18**
Nitrate as Nitrate	**mg/L**	**03/07/98**	**1.0**	**3.1**
Phosphate	mg/L	03/10/98	10	N.D.
Lab No: 9803101-06				
Sample Desc : **LIQUID,U-6**				
Iron by ICP	**mg/L**	**03/05/98**	**0.010**	**60**
Nitrate as Nitrate	**mg/L**	**03/07/98**	**1.0**	**3.5**
Phosphate	mg/L	03/10/98	10	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Tosco 5325, 180061
Sample Descript: TB-LB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9803101-01

Sampled: 03/03/98
Received: 03/03/98

Analyzed: 03/12/98
Reported: 03/16/98

QC Batch Number: GC031298802005A
Instrument ID: GCHP05

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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	110

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Tosco 5325, 180061	Sampled: 03/03/98
6747 Sierra Court Suite J	Sample Descript: U-2	Received: 03/03/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/12/98
Attention: Deanna Harding	Lab Number: 9803101-02	Reported: 03/16/98

QC Batch Number: GC031298802005A
Instrument ID: GCHP05

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	80000
Methyl t-Butyl Ether	500	16000
Benzene	100	3000
Toluene	100	1100
Ethyl Benzene	100	820
Xylenes (Total)	100	16000
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Tosco 5325, 180061	Sampled: 03/03/98
6747 Sierra Court Suite J	Sample Descript: U-3	Received: 03/03/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/12/98
Attention: Deanna Harding	Lab Number: 9803101-03	Reported: 03/16/98

QC Batch Number: GC031298802005A
Instrument ID: GCHP05

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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	83

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Tosco 5325, 180061	Sampled: 03/03/98
6747 Sierra Court Suite J	Sample Descript: U-4	Received: 03/03/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/12/98
Attention: Deanna Harding	Lab Number: 9803101-04	Reported: 03/16/98

QC Batch Number: GC031298802005A
Instrument ID: GCHP05

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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	87

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: Tosco 5325, 180061	Sampled: 03/03/98
6747 Sierra Court Suite J	Sample Descript: U-5	Received: 03/03/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/12/98
Attention: Deanna Harding	Lab Number: 9803101-05	Reported: 03/16/98

QC Batch Number: GC031298802002A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	1700
Methyl t-Butyl Ether	50	330
Benzene	10	29
Toluene	10	N.D.
Ethyl Benzene	10	150
Xylenes (Total)	10	190
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	122

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Tosco 5325, 180061	Sampled: 03/03/98
6747 Sierra Court Suite J	Sample Descript: U-6	Received: 03/03/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/12/98
Attention: Deanna Harding	Lab Number: 9803101-06	Reported: 03/16/98

QC Batch Number: GC031298802005A
Instrument ID: GCHP05

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	**25**	**1600**
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	80

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

SEQUOIA ANALYTICAL - ELAP #1271

Mike Gregory
Project Manager

Sequoia Analytical

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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: Tosco 5325, 180061	Received: 03/03/98
6747 Sierra Court Suite J		
Dublin, CA 94568	Lab Proj. ID: 9803101	Reported: 03/16/98
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 13 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

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: Tosco 5325, 180061
Matrix: Liquid
Work Order #: 9803101 -01-04, 06

Reported: Mar 16, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC031298802005A	GC031298802005A	GC031298802005A	GC031298802005A	GC031298802005A
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:	C. Westwater	C. Westwater	C. Westwater	C. Westwater	C. Westwater
MS/MSD #:	8030669	8030669	8030669	8030669	8030669
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Analyzed Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Result:	20	21	21	67	280
MS % Recovery:	100	105	105	112	93
Dup. Result:	18	18	18	57	310
MSD % Recov.:	90	90	90	95	103
RPD:	11	15	15	16	10
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS031298	LCS031298	LCS031298	LCS031298	LCS031298
Prepared Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Analyzed Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
LCS Result:	17	18	17	56	300
LCS % Recov.:	85	90	85	93	100
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

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

Client Project ID: Tosco 5325, 180061
Matrix: Liquid
Work Order #: 9803101-05

Reported: Mar 16, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC031298802002A	GC031298802002A	GC031298802002A	GC031298802002A	GC031298802002A
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:	C. Westwater	C. Westwater	C. Westwater	C. Westwater	C. Westwater
MS/MSD #:	8031032	8031032	8031032	8031032	8031032
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Analyzed Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	330 µg/L
Result:	16	16	17	49	340
MS % Recovery:	80	80	85	82	103
Dup. Result:	19	20	19	61	380
MSD % Recov.:	95	100	95	102	115
RPD:	17	22	11	22	11
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS031298	LCS031298	LCS031298	LCS031298	LCS031298
Prepared Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Analyzed Date:	3/12/98	3/12/98	3/12/98	3/12/98	3/12/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	330 µg/L
LCS Result:	19	18	20	58	330
LCS % Recov.:	95	90	100	97	100
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

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Client Project ID: Tosco 5325, 180061
Matrix: Liquid
Work Order #: 9803101-02-06

Reported: Mar 16, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Nitrate	Phosphate
QC Batch#:	IN0306983000A	IN0309983000ACC
Analy. Method:	EPA 300.0	EPA 300.0
Prep. Method:	N.A.	N.A.
Analyst:	J. Hills	J. Hills
MS/MSD #:	980310102	980310103
Sample Conc.:	N.D.	N.D.
Prepared Date:	3/6/98	3/9/98
Analyzed Date:	3/6/98	3/10/98
Instrument I.D.#:	INIC1	INIC1
Conc. Spiked:	10 mg/L	100 mg/L
Result:	10	110
MS % Recovery:	100	110
Dup. Result:	10	110
MSD % Recov.:	100	110
RPD:	0.0	0.0
RPD Limit:	0-20	0-20

LCS #:	LCS030698	LCS030998
Prepared Date:	3/6/98	3/9/98
Analyzed Date:	3/6/98	3/10/98
Instrument I.D.#:	INIC1	INIC1
Conc. Spiked:	2.0 mg/L	10 mg/L
LCS Result:	2.0	11
LCS % Recov.:	100	110

MS/MSD	75-125	75-125
LCS	80-120	80-120
Control Limits		

SEQUOIA ANALYTICAL

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Work Order #: 9803101-02-06

Reported: Mar 16, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0304986010MDA	ME0304986010MDA	ME0304986010MDA	ME0304986010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010
Analyst:	S. LeBarron	S. LeBarron	S. LeBarron	S. LeBarron
MS/MSD #:	980305201	980305201	980305201	980305201
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/4/98	3/4/98	3/4/98	3/4/98
Analyzed Date:	3/5/98	3/5/98	3/5/98	3/5/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.2 mg/L	1.2 mg/L	1.2 mg/L	1.2 mg/L
Result:	1.4	1.4	1.4	1.3
MS % Recovery:	140	140	140	130
Dup. Result:	1.3	1.3	1.3	1.3
MSD % Recov.:	130	130	130	130
RPD:	7.4	7.4	7.4	0.0
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	BLK030498	BLK030498	BLK030498	BLK030498
Prepared Date:	3/4/98	3/4/98	3/4/98	3/4/98
Analyzed Date:	3/5/98	3/5/98	3/5/98	3/5/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.2 mg/L	1.2 mg/L	1.2 mg/L	1.2 mg/L
LCS Result:	1.3	1.4	1.3	1.3
LCS % Recov.:	130	140	130	130
MS/MSD Control Limits	80-120	80-120	80-120	80-120
LCS Control Limits	80-120	80-120	80-120	80-120

SEQUOIA ANALYTICAL

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