GETTLER-RYAN INC.

TRANSMITTAL

December 28, 1998
G-R #:180022

Do another QMR (Jan 1999) then do RECA for closure

TO: Ms. Eva Chu
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

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	December 11, 1998	Groundwater Monitoring and Sampling Report Fourth Quarter 1998 - Event of October 5, 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. Keith Romstad, ERI, 74 Digital Drive, Suite 6, Novato, CA 94949

agency/7176trb.qmt

GETTLER-RYAN INC.

December 11, 1998
G-R Job #180022

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

RE: Fourth Quarter 1998 Groundwater Monitoring & Sampling Report
Tosco (Unocal) Service Station #7176
7850 Amador Valley Boulevard
Dublin, California

Dear Ms. Berry:

This report documents the quarterly groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On October 5, 1998, 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,

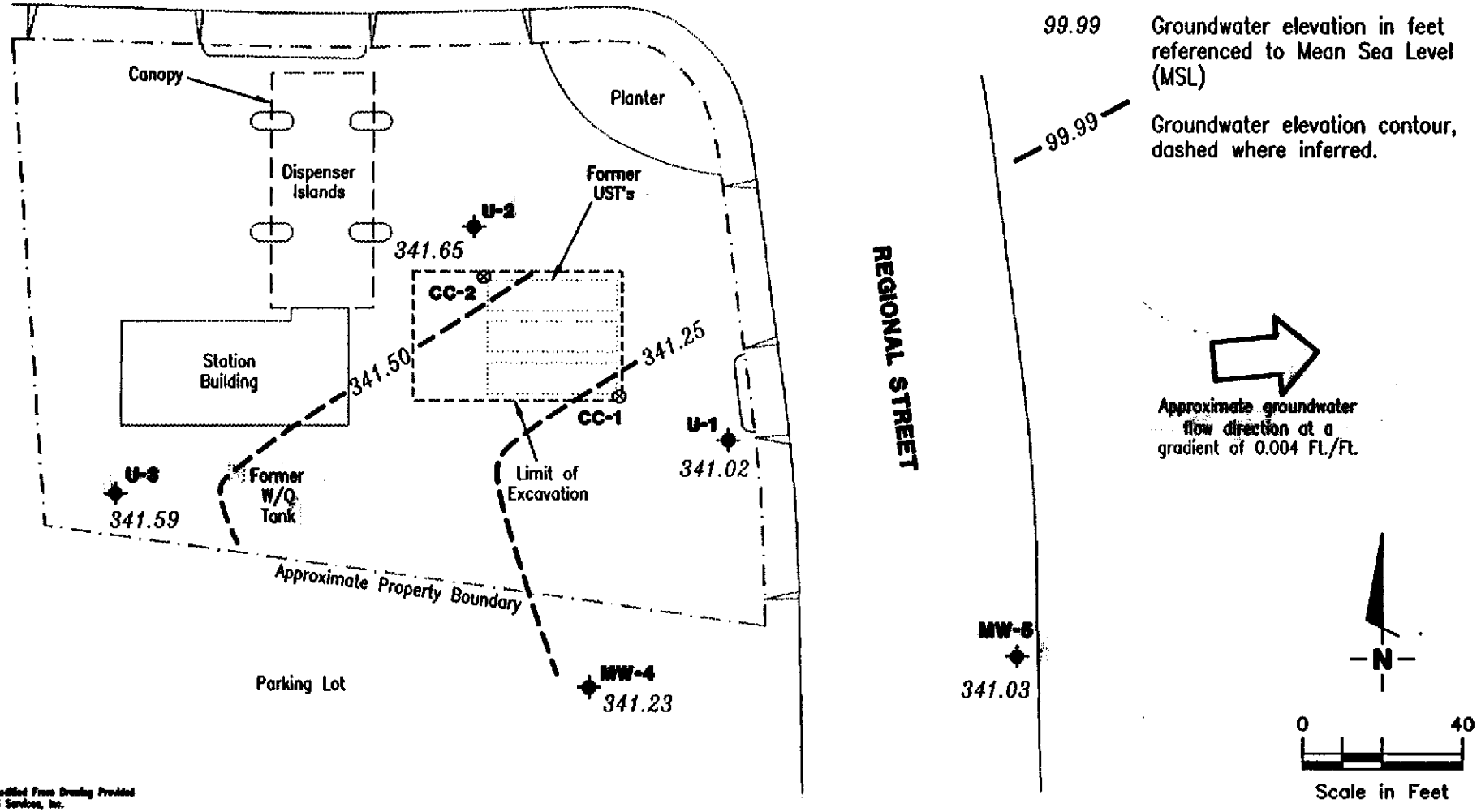
Deanna L. Harding
Project Coordinator

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

7176.qml



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

Gettler - Ryan Inc.
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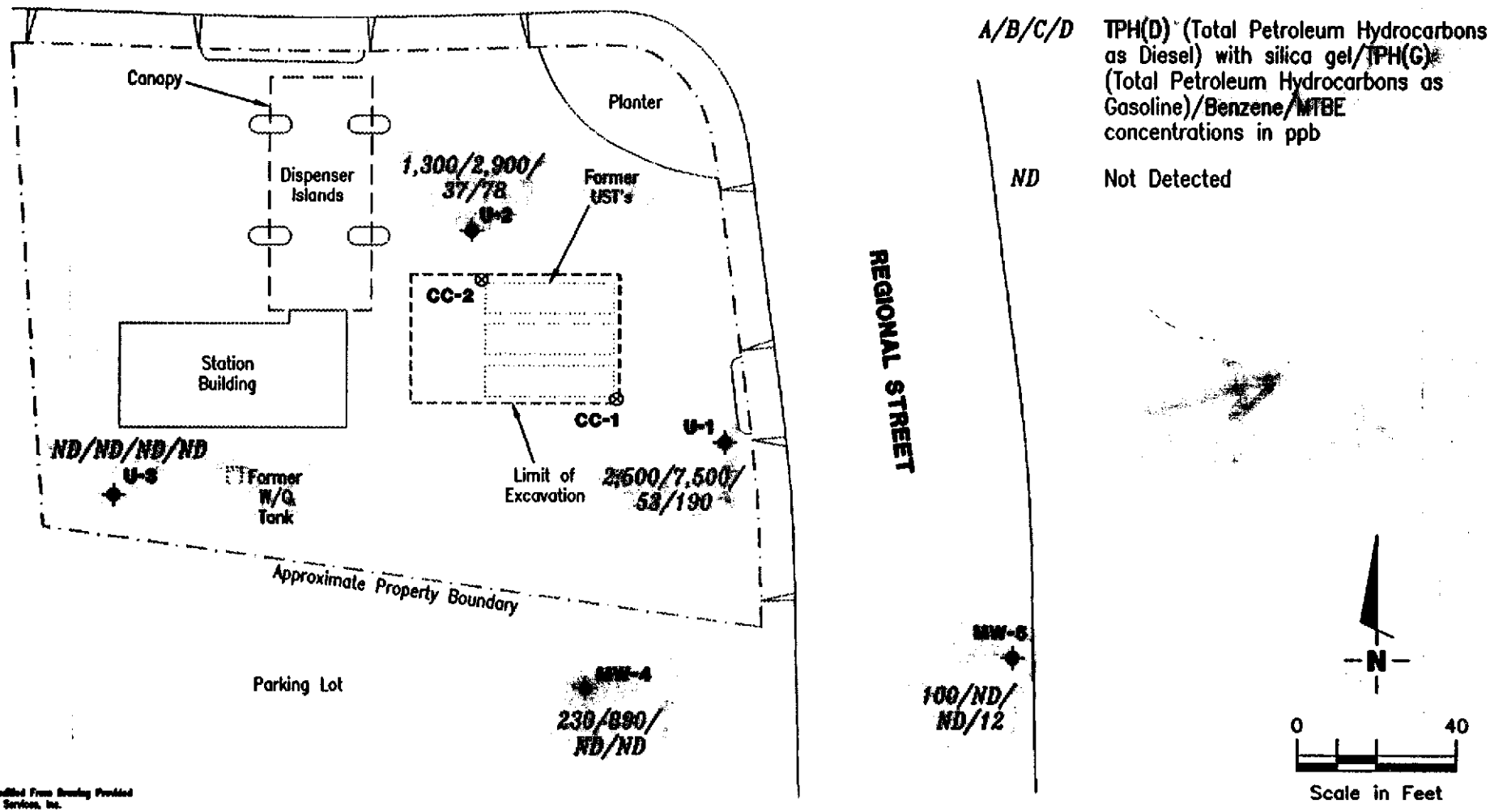
Dublin, CA 94568

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

FIGURE 1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180022		October 5, 1998	



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

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Dublin, CA 94568

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

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
180022		October 5, 1998	

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/[illegible][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**	**98**

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-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**
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]**	**880[15]**	**ND[12]**	**ND[12]**	**ND[12]**	**14**	**ND[12]**
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**	**ND**
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**

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 gas 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.

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.

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, 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.

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: 10-5-98

City: Dublin Sampler: Joe

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

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

Total Depth 27.95 ft.

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

Depth to Water 14.57 ft. (14.57)

13.38 X VF 0.17 = 2.27 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: 11:30 Weather Conditions: clear

Sampling Time: 11:47 A.M. Water Color: clear Odor: yes

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 X100	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:33	2.5	7.09	3.33	72.1			
11:35	5	6.90	3.36	69.8			
11:38	7	6.94	3.37	69.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-1	3 voA	Y	HCL	Seq	TPHG, BTEX, MTBE
"	1 Amb	—	—	"	TPHD

COMMENTS: ORC in well removed
INSTALLED NEW 2" CAP & PADLOCK.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 10-5-98

City: Dublin Sampler: Joe

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

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

Total Depth 26.51 ft.

Depth to Water 14.90 ft.

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

11.61 X VF 0.17 = 1.97 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: 10:20 Weather Conditions: clear

Sampling Time: 10:40 A.M. Water Color: clear Odor: yes

Purging Flow Rate: 0.5 gpm Sediment Description: non

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm x 10^3	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
10:30	2	7.37	4.11	70.1			
10:32	4	7.30	3.96	71.2			
10:34	6	7.36	3.88	71.6			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-2	3 x 40 A	Y	HCL	Seq	TPHG, BTEX, MTBE
"	1 Amb	-	-	"	TRPD

COMMENTS: ORC in well removed
INSTALLED NEW 2" well cap & padlock.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 10-5-98

City: Dublin Sampler: Joe

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

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

Total Depth 28.58 ft.

Depth to Water 16.50 ft.

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

12.08 X VF 0.17 = 2.05 X 3 (case volume) = Estimated Purge Volume: 6.5 (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: 10:08 A.M. Water Color: clear Odor: none

Purging Flow Rate: 0.5 gpm. Sediment Description: non

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)
9:55	2	7.19	3.61	72.3			
9:57	4	7.37	3.46	73.0			
9:59	6.5	7.42	3.44	72.1			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
U-3	3 VOA	Y	HCL	Seq	TPHG, BTEX, MTBE
"	1 Amb	—	—	"	TPHD

COMMENTS: ORC in well removed
INSTALLED NEW 2" well cap & Padlock.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 10-5-98

City: Dublin Sampler: Joe

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

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

Total Depth 25.50 ft.

Depth to Water 15.18 ft.

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

10.32 X VF 0.17 = 1.75 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: 10:55 Weather Conditions: clear

Sampling Time: 11:20 A.m Water Color: clear Odor: none

Purging Flow Rate: 0.5 gpm. Sediment Description: non

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

Time	Volume (gal.)	pH	Conductivity µmhos/cm X 1,000	Temperature °F	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:08	2.5	7.50	5.11	65.9			
11:10	3	7.58	4.76	66.2			
11:12	5.5	7.54	4.75	66.3			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	3 vOA	Y	HCL	Seq	TPHG, BTEX, MTBE
"	1 Amb	—	—	"	TPHD

COMMENTS: _____

9/97-fieldst.frm

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/
Facility # 7176 Job#: 180022

Address: 7850 Amador Valley Blvd. Date: 10-5-98

City: Dublin Sampler: Joe

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

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

Total Depth 25.00 ft.

Depth to Water 14.00 ft.

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

11.00 X VF 0.17 = 1.87 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: 9:00 Weather Conditions: clear

Sampling Time: 9:30 A.M. Water Color: clear Odor: none

Purging Flow Rate: 0.5 gpm Sediment Description: non

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)
9:15	2	7.16	3.91	69.2			
9:17	4	7.30	3.85	69.5			
9:19	6	7.25	3.81	69.9			

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	3 voA	Y	HCL	Seq	TPHG, BTEX, MTBE
"	1 Amb	—	—	"	TRAD

COMMENTS: _____

TOSCO

Tosco Marketing Company
3500 Cove 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) MS. TINA BERRY
(Phone) (925) 277-2321
Laboratory Name Sequoia Analytical
Laboratory Release Number
Samples Collected by (Name) JOE AJEMIAN
Collection Date 10-5-98
Signature

9810356

Analyses To Be Performed

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)	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)					DO NOT BILL TB-LB ANALYSIS Remarks
TB-LB	01	1 VOA	W	—	—	HCl	Y	✓												With Silica gel.
U-1	02	3 VOA 1 AmL	"	G	11:47 A.M	"	"	✓	✓											
U-2	03	"	"	"	10:40 A.M	"	"	✓	✓											
U-3	04	"	"	"	10:08 A.M	"	"	✓	✓											Conf. of MTBE Hit by 8260.
MW-4	05	"	"	"	11:20 A.M	"	Y	✓	✓											
MW-5	06	"	"	"	9:30 A.M	"	"	✓	✓											

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	10-5-98			
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
					10/5/98 15:35

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

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: TB-LB	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/09/98
Attention: Deanna Harding	Lab Number: 9810356-01	Reported: 10/30/98

Instrument ID: HP5

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**	**0.70**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**0.71**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

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

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
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: 7176/180022.85, 7850 Amador
Sample Descript: U-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810356-02

Sampled: 10/05/98
Received: 10/05/98
Extracted: 10/08/98
Analyzed: 10/16/98
Reported: 10/30/98

QC Batch Number: GC1008980HBPEXZ
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	2500
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	78

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
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: 7176/180022.85, 7850 Amador
Sample Descript: U-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9810356-02

Sampled: 10/05/98
Received: 10/05/98

Analyzed: 10/09/98
Reported: 10/30/98

Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	7500
Methyl t-Butyl Ether	50	190
Benzene	10	53
Toluene	10	N.D.
Ethyl Benzene	10	680
Xylenes (Total)	10	350
Chromatogram Pattern:		
Weathered Gas		C6-C12

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

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: U-1	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 11/02/98
Attention: Deanna Harding	Lab Number: 9810356-02	Reported: 11/05/98

Instrument ID: MS-2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.0	180

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	Q
Toluene-d8	88	110	Q
4-Bromofluorobenzene	86	115	92

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

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: U-2	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 10/08/98
	Analysis Method: EPA 8015 Mod	Analyzed: 10/16/98
Attention: Deanna Harding	Lab Number: 9810356-03	Reported: 10/30/98

QC Batch Number: GC1008980HBPEXZ
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	1300
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: U-2	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/09/98
Attention: Deanna Harding	Lab Number: 9810356-03	Reported: 10/30/98

Instrument ID: HP9

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	2900
Methyl t-Butyl Ether	12	78
Benzene	2.5	37
Toluene	2.5	8.4
Ethyl Benzene	2.5	110
Xylenes (Total)	2.5	7.3
Chromatogram Pattern:		Gasoline
Unidentified HC		<C8

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	79

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

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: U-3	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 10/13/98
	Analysis Method: EPA 8015 Mod	Analyzed: 10/17/98
Attention: Deanna Harding	Lab Number: 9810356-04	Reported: 10/30/98

QC Batch Number: GC1013980HBPEXE
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	84

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: U-3	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/09/98
Attention: Deanna Harding	Lab Number: 9810356-04	Reported: 10/30/98

Instrument ID: HP5

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	105

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

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: 7176/180022.85, 7850 Amador
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9810356-05

Sampled: 10/05/98
Received: 10/05/98
Extracted: 10/13/98
Analyzed: 10/17/98
Reported: 10/30/98

QC Batch Number: GC1013980HBPEXE
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	230
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: MW-4	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/09/98
Attention: Deanna Harding	Lab Number: 9810356-05	Reported: 10/30/98

Instrument ID: HP5

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**890**
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	**5.0**	**14**
Chromatogram Pattern:		
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	90

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

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: MW-5	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 10/13/98
	Analysis Method: EPA 8015 Mod	Analyzed: 10/17/98
Attention: Deanna Harding	Lab Number: 9810356-06	Reported: 10/30/98

QC Batch Number: GC1013980HBPEXE
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH) with Silica Gel Cleanup

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	100
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	81

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Sampled: 10/05/98
6747 Sierra Court Suite J	Sample Descript: MW-5	Received: 10/05/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/09/98
Attention: Deanna Harding	Lab Number: 9810356-06	Reported: 10/30/98

Instrument ID: HP5

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**	**12**
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	98

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

SEQUOIA ANALYTICAL - ELAP #1271

Tod Granicher
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: 7176/180022.85, 7850 Amador

QC Sample Group: 9810356

Reported: Nov 3, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015A
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC1008980HBPEXZ

Sample No.:	9810009-5
Date Prepared:	10/8/98
Date Analyzed:	10/16/98
Instrument I.D.#:	GCHP5B
Sample Conc., ug/L:	53
Conc. Spiked, ug/L:	1000
Matrix Spike, ug/L:	790
% Recovery:	74
Matrix Spike Duplicate, ug/L:	730
% Recovery:	68
Relative % Difference:	8.5
RPD Control Limits:	0-50

LCS Batch#: BLK100898ZS

Date Prepared:	10/8/98
Date Analyzed:	10/15/98
Instrument I.D.#:	GCHP5B
Conc. Spiked, ug/L:	1000
Recovery, ug/L:	700
LCS % Recovery:	70

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Tod Granicher
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.

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

Client Project ID: 7176/180022.85, 7850 Amador

QC Sample Group: 9810356

Reported: Nov 3, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015A
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC1013980HBPEXE SG

LCS ID: BLK101398ES/ESD
Date Prepared: 10/13/98
Date Analyzed: 10/17/98
Instrument I.D.#: GCHP5B

Conc. Spiked, ug/L:	1000
Blank Spike, ug/L:	730
% Recovery:	73
Blank Spike Duplicate, ug/L:	800
% Recovery:	80
Relative % Difference:	9.2
% Recovery Control Limits:	50-150
RPD Control Limits:	0-50

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Tod Granicher
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

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

Client Project ID: 7196/180022.85, 7850 Amador
Matrix: Liquid
Work Order #: 9810356 01-06
Reported: Nov 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC100998802005A	GC100998802005A	GC100998802005A	GC100998802005A	GC100998802005A
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 #:	8100540	8100540	8100540	8100540	8100540
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/9/98	10/9/98	10/9/98	10/9/98	10/9/98
Analyzed Date:	10/9/98	10/9/98	10/9/98	10/9/98	10/9/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	290 µg/L
Result:	18	18	18	57	270
MS % Recovery:	90	90	90	95	93
Dup. Result:	18	19	19	58	270
MSD % Recov.:	90	95	95	97	93
RPD:	0.0	5.4	5.4	1.7	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS100998	LCS100998	LCS100998	LCS100998	LCS100998
Prepared Date:	10/9/98	10/9/98	10/9/98	10/9/98	10/9/98
Analyzed Date:	10/9/98	10/9/98	10/9/98	10/9/98	10/9/98
Instrument I.D.#:	HP5	HP5	HP5	HP5	HP5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	290 µg/L
LCS Result:	19	19	19	59	270
LCS % Recov.:	95	95	95	98	93
MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130	60-140

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ELAP #1271

Tod Granicher
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

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Gettler Ryan/Geostrategies	Client Proj. ID: 7176/180022.85, 7850 Amador	Received: 10/05/98
6747 Sierra Court Suite J		
Dublin, CA 94568	Lab Proj. ID: 9810356	Reported: 10/30/98
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 16 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

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Tod Granicher
Project Manager