ERI

ENVIRONMENTAL RESOLUTIONS, INC.

TRANSMITTAL

TO: Ms. Joan Fleck
California Regional Water Quality Control Board,
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

DATE: March 31, 2005
PROJECT NUMBER: 261913.Q044
SUBJECT: Redwood Oil Facility 114,
1855 Guerneville Road, Santa Rosa,
California.

FROM: Mr. Glenn L. Matteucci
TITLE: Project Manager

WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	March 28, 2005	Groundwater Monitoring and Remediation Status Report

THESE ARE TRANSMITTED as checked below:

[X] For your files [X] As requested

REMARKS: As requested by Redwood Oil Company (Redwood), Environmental Resolutions, Inc. (ERI), is forwarding one copy of the above-mentioned document directly to your office. Please call the undersigned at (707) 766-2000, with any questions or comments.

SCANNED IMAGE

Glenn L. Matteucci, Project Manager

cc: Mr. John Mahoney, Redwood Oil Company
1 copy to ERI project file 261913

601 North McDowell Boulevard, Petaluma, California 94954 707-766-2000 FAX 707-789-0414
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ERI

ENVIRONMENTAL RESOLUTIONS, INC.

March 28, 2005
ERI 261913.Q044

Mr. John Mahoney
Redwood Oil Company
455 Yolanda Avenue
Santa Rosa, California 95404

Subject: Groundwater Monitoring and Remediation Status Report, Fourth Quarter 2004, Redwood Oil Facility 114, 1855 Guerneville Road, Santa Rosa, California. **Wastewater Discharge Permit No. SR-GW5287.**

INTRODUCTION

At the request of Redwood Oil Company (Redwood Oil), Environmental Resolutions, Inc. (ERI) performed fourth quarter 2004 groundwater monitoring and sampling and remedial activities at the subject site.

Quarterly groundwater monitoring and sampling was conducted on December 31, 2004, in accordance with ERI's Groundwater Sampling Protocol (Attachment A). The analytical results for groundwater samples collected during the fourth quarter 2004 monitoring events are reasonably consistent with previous results, within limits of previously-observed variation (Table 1A and Table 1B). Analytical laboratory reports are included in Attachment B. Copies of the daily field reports from the sampling event are included as attachment C.

GROUNDWATER MONITORING AND SAMPLING SUMMARY

Sampling date:		12/31/04
Gauging date:		12/31/04
Wells gauged and sampled:		MW1 through MW4, MW7 through MW11
Water wells sampled only:		2050 and 2075 Marlow Road
Remediation system status on sampling date:		Groundwater extraction and treatment (GET) system activated for treatment of purge and decon water
Concurrently sampled:		No
Laboratory:		Entech Analytical Labs, Inc. of Santa Clara, CA
Analyses performed:	EPA Method 8015M:	TPHd, TPHg
	EPA Method 8260B:	MTBE, BTEX, ETBE, TAME, TBA, DIPE, ethanol, 1,2-DCA, EDB
Waste Disposal:		296 gallons purge and decon water transferred to GET system

REMEDIATION SYSTEM SUMMARY

Groundwater Extraction and Treatment System

The GET system extracts groundwater from wells MW1 through MW3, MW7, and MW8 using submersible pneumatic pumps. Extracted groundwater is directed through granulated activated carbon (GAC) vessels prior to discharge to the storm sewer. When the GET system is operational, ERI collects monthly water samples at influent, intermediate, and effluent sample ports to ensure compliance with the groundwater discharge permit and proper performance of the GET system. Analytical data and other pertinent information are included as Table 2. Analytical laboratory reports and Chain-of-Custody records are included in Attachment B.

ERI began GET system operation and maintenance on October 1, 2004. On October 14, ERI discovered that the system automatically shut down in response to a compressor failure. The compressor was replaced; however the system was not continuously operated since October 2004 because mass removal rates were low, and GET is not a cost effective technology to remove the dissolved-phase hydrocarbons and related compounds at current concentrations in groundwater beneath the site (ERI, January 25 and March 17, 2004). Operation data for the last two weeks of September are not available and the final shut-down date is not known.

During the period from September 17, 2004, through December 31, 2004, approximately 18,074 gallons of water were treated and discharged through the GET system. Total petroleum hydrocarbons as gas (TPHg) and methyl tertiary butyl ether (MTBE) removed from the groundwater to date are 31.72 and 0.54 pounds, respectively. A graphical representation of pounds removed by the groundwater extraction system is included as Graph 1.

System start-up dates:		August 2000
System discharge permits:		Wastewater Discharge Permit SR-GW5287
Reporting period:		09/17/04 to 12/31/04
System modifications during reporting period:		None
System status during reporting period:		Intermittently active
Laboratory:		Entech Analytical Labs, Inc. of Santa Clara, CA
Effluent analyses performed:		
	EPA Method 8015M:	TPHd, TPHg
	EPA Method 8260B:	MTBE, BTEX, ETBE, TAME, TBA, DIPE, 1,2-DCA, EDB
Non-compliance events and exceptions:		None

System Performance:

Period	Volume of Groundwater Treated (gal)	Mass of TPHg Removed (pounds)	Mass of MTBE Removed (pounds)
09/17/04 through 12/31/04:	18,074	0.11	0.00
To Date:	3,160,318	31.72	0.54

DOCUMENT DISTRIBUTION

ERI recommends forwarding copies of this report to:

Ms. Joan Fleck
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Ms. Donna Seaman
Subregional Water Management System
Industrial Waste Section
4300 Llano Road
Santa Rosa, California 95407

LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This report has been prepared for Redwood, and any reliance on this report by third parties shall be at such party's sole risk

Please call Mr. Glenn Matteucci, ERI's project manager for this site, at (707) 766-2000 or myself at (415) 798-0175 with any questions regarding this report.

Sincerely,
Environmental Resolutions, Inc.

Travis Firm
Senior Staff Scientist

John B. Bobbitt
R.G. 4313

SCANNED IMAGE

REGISTERED GEOLOGIST JOHN BAILEY BOBBITT exp 4-30-06 No 4313 STATE OF CALIFORNIA

Attachments: References

Table 1A:	Cumulative Groundwater Monitoring and Sampling Data
Table 1B:	Additional Cumulative Groundwater Monitoring and Sampling Data
Table 2:	Operational and Performance Data for Groundwater Extraction and System
Plate 1:	Site Vicinity Map
Plate 2:	Groundwater Elevation Map December 31, 2004
Graph 1:	Total Liquid Phase Hydrocarbons Removed Vs. Gallons Removed
Attachment A:	Groundwater Sampling Protocol
Attachment B:	Laboratory Analytical Reports and Chain-of-Custody Records
Attachment C:	Field Notes

REFERENCES

Environmental Resolutions, Inc. January 25, 2005. Notification of Remedial Activities to be conducted at 1855 Guerneville Road, Santa Rosa, California. ERI 2619JF.L01.

Environmental Resolutions, Inc. March 17, 2005. Work Plan for Supplemental Evaluation of Groundwater, Redwood Oil Facility 114, 1855 Guerneville Road, Santa Rosa, California. ERI 261903.W01.

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility #114
1855 Guemeville Road
Santa Rosa, California
(Page 1 of 9)

Well ID # (TOC)	Sample Date	DTW	Elev.	TPHd	TPHg	MTBE	B	T	E	X
		<——feet——>		<——ug/L——>						
MW1	09/01/89	15.20	93.01	—	—	—	—	—	—	—
(108.21)	06/01/90	9.61	98.60	—	—	—	—	—	—	—
(123.18)	02/01/91	13.48	109.70	210	2,200	—	370	99	88	180
	03/01/91	12.10	111.08	—	—	—	—	—	—	—
	04/01/91	6.07	117.11	—	—	—	—	—	—	—
	05/16/91	10.24	112.94	60	2,900	—	370	38	80	120
	06/07/91	12.36	110.82	—	—	—	—	—	—	—
	07/01/91	12.76	110.42	—	—	—	—	—	—	—
	08/01/91	15.17	108.01	—	—	—	—	—	—	—
	08/16/91	16.01	107.17	60	1,800	—	590	16	77	69
	09/09/91	16.34	106.84	—	—	—	—	—	—	—
	10/04/91	16.47	106.71	—	—	—	—	—	—	—
	11/06/91	15.20	107.98	—	—	—	—	—	—	—
	12/06/91	14.00	109.18	530	1000	—	460	23	51	66
	01/06/92	12.24	110.94	—	—	—	—	—	—	—
	02/19/92	7.80	115.38	—	—	—	—	—	—	—
(123.82)	03/30/92	6.74	117.08	470	2600	—	600	<0.5	100	130
	04/23/92	7.76	116.06	—	—	—	—	—	—	—
	05/18/92	9.69	114.13	—	—	—	—	—	—	—
	06/16/92	11.91	111.91	<50	6000	—	1100	110	150	300
	07/24/92	14.90	108.92	—	—	—	—	—	—	—
	08/18/92	14.94	108.88	—	—	—	—	—	—	—
	09/24/92	15.59	108.23	1600	16000	—	2400	52	310	320
	10/21/92	15.59	108.23	—	—	—	—	—	—	—
	11/16/92	15.41	108.41	—	—	—	—	—	—	—
	12/16/92	9.78	114.04	100	70	—	4.5	<0.5	0.7	1.2
	01/13/93	6.34	117.48	—	—	—	—	—	—	—
	02/23/93	7.48	116.34	—	—	—	—	—	—	—
	03/17/93	8.68	115.14	710	<50	—	<0.5	<0.5	<0.5	<0.5
	04/16/93	7.78	116.04	—	—	—	—	—	—	—
	05/14/93	8.48	115.34	—	—	—	—	—	—	—
	09/30/93	15.45	108.37	330	2300	—	930	21	38	50
(123.25)	03/22/94	7.52	115.73	540	5,900	—	610	24	55	44
	09/22/94	13.70	109.55	70	5,800	—	1,500	86	210	340
	03/24/95	3.76	119.49	370	1,500	—	260	30	58	85
	08/30/95	11.81	111.44	390	12,000	—	2,800	210	410	580
	03/19/96	5.52	117.73	<50	730	—	230	18	54	46
	09/16/96	17.30	105.95	<50	470	—	74	20	18	32
	03/24/97	14.27	108.98	70	170	—	21	8.7	6.7	11
	09/29/97	18.00	105.25	60	550	—	74	21	28	44
	04/30/98	7.55	115.70	<50	250	—	25	3.0	11	13
	07/30/98	11.83	111.42	<50	4,000	24	510	170	180	240
	10/27/98	23.97	99.28	<50	490	6	8	3	3	4
	01/27/99	16.08	107.17	<50	340	9.6	23	17	13	31
	04/21/99	6.40	116.85	<50	2,700	30	260	140	140	240
	07/29/99	—	—	—	—	—	—	—	—	—
	10/28/99	21.79	101.46	<50	<50	5.2	0.80	<0.5	<0.5	<0.5
	02/04/00	11.60	111.65	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	04/27/00	20.45	102.80	<50	92	18	2.0	1.3	1.1	2.0
	07/25/00	15.15	108.10	240	4900	43	320	33	130	90
	10/26/00	21.49	101.76	<50	<50	5.9	1.3	<0.5	<0.5	<0.5
	01/17/01	21.72	101.53	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/24/01	14.38	108.87	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	07/31/01	16.55	106.70	280	2300	69	220	29	110	53
(124.84)	12/05/01	23.00	101.84	<50	260	8.4	14	22	9.6	41
	01/31/02	23.00	101.84	<50	<50	<5.0	1.1	<0.5	<0.5	2.6
	04/17/02	21.85	102.99	<50	<50	3	<1	<1	<1	<1
	07/10/02	22.05	102.79	<50	<50	3	<1	<1	<1	<1
	10/10/02	22.00	102.84	<63	<50	<5.0	<0.5	<0.5	<0.5	<1
	01/13/03	6.20	118.64	100	590	1.4	47	6.9	<2.5	18
	03/14/03	18.35	106.49	—	—	—	—	—	—	—
	04/16/03	18.40	106.44	<50	58	3	3	2	2	2
	07/16/03	18.35	106.49	<50	<50	3	1	<1	<1	<1
	10/21/03	18.35	106.49	<50	<50	11	<1	<1	<1	<1
	04/06/04	18.35	106.49	<50	140	1.6	2.8	2.5	2.2	12
	12/31/04	**9.40**	**115.44**	**<50**	**190**	**2.5a**	**12a**	**1.1a**	**3.6a**	**1.0a**

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility #114
1855 Guerneville Road
Santa Rosa, California
(Page 2 of 9)

Well ID # (TOC)	Sample Date	DTW <—feet—>	Elev.	TPHd <—ug/L—>	TPHg	MTBE	B	T	E	X
MW2	09/01/89	7.15	99.85	—	—	—	—	—	—	—
(107.00)	10/06/89	—	—	110,000	378,000	—	16,900	29,100	2,700	22,200
	06/01/90	6.48	100.52	—	—	—	—	—	—	—
(122.68)	02/01/91	6.93	115.75	—	—	—	—	—	—	—
	03/01/91	7.38	115.30	—	—	—	—	—	—	—
	04/01/91	6.35	116.33	—	—	—	—	—	—	—
	05/16/91	6.79	115.89	—	—	—	—	—	—	—
	06/07/91	7.22	115.46	—	—	—	—	—	—	—
	07/01/91	7.63	115.05	—	—	—	—	—	—	—
	08/01/91	7.58	115.10	—	—	—	—	—	—	—
	08/16/91	8.34	114.34	—	—	—	—	—	—	—
	09/09/91	8.19	114.49	—	—	—	—	—	—	—
	10/04/91	8.89	113.79	—	—	—	—	—	—	—
	11/06/91	7.94	114.74	—	—	—	—	—	—	—
	12/06/91	7.41	115.27	—	—	—	—	—	—	—
	01/06/92	7.75	114.93	—	—	—	—	—	—	—
	02/19/92	6.05	116.63	—	—	—	—	—	—	—
(123.14)	03/30/92	6.55	116.59	—	—	—	—	—	—	—
	04/23/92	6.24	116.90	—	—	—	—	—	—	—
	05/18/92	7.09	116.05	—	—	—	—	—	—	—
	06/16/92	7.65	115.49	—	—	—	—	—	—	—
	07/24/92	9.51	113.63	—	—	—	—	—	—	—
	08/18/92	9.50	113.64	—	—	—	—	—	—	—
	09/24/92	8.97	114.17	—	—	—	—	—	—	—
	10/21/92	8.73	114.41	—	—	—	—	—	—	—
	11/16/92	8.64	114.50	—	—	—	—	—	—	—
	12/16/92	7.07	116.07	—	—	—	—	—	—	—
	01/13/93	5.78	117.36	—	—	—	—	—	—	—
	02/23/93	10.19	112.95	—	—	—	—	—	—	—
	03/17/93	8.41	114.73	—	—	—	—	—	—	—
	04/16/93	6.75	116.39	—	—	—	—	—	—	—
	05/14/93	8.47	114.67	—	—	—	—	—	—	—
	09/30/93	13.61	109.53	—	—	—	—	—	—	—
	03/22/94	6.34	116.80	25,000	25,000	—	370	670	640	3,400
(123.20)	09/22/94	8.40	114.80	30,000	51,000	—	730	1,700	1,700	8,300
	03/27/95	5.92	117.28	—	—	—	—	—	—	—
	08/30/95	7.96	115.24	—	—	—	—	—	—	—
	03/19/96	6.14	117.06	13,000	19,000	—	120	79	540	1,600
	09/16/96	7.15	116.05	—	—	—	—	—	—	—
	03/24/97	5.00	118.20	32,000	53,000	—	650	1,000	3,000	13,000
	09/29/97	7.16	116.04	—	—	—	—	—	—	—
	04/30/98	4.83	118.37	1,600	64,000	—	390	<0.5	1,600	5,700
	07/30/98	5.87	117.33	77,000	340,000	<5.0	640	290	3,000	8,200
	10/27/98	7.32	115.88	1,200,009	110,000	6	240	50	1,400	3,000
	01/27/99	4.67	118.53	29,000	31,000	<500	240	92	1,500	3,200
	04/21/99	6.28	116.92	120,008	19,000	40	48	85	290	1,100
	07/29/99	7.92	115.28	14,000	16,000	260	110	50	500	450
	10/28/99	20.30	102.90	120,008	190,000	<50	960	770	5,100	1,300
	02/04/00	7.89	115.31	8,100	9,300	60	13	42	130	440
	04/27/00	13.25	109.95	5,700	19,000	240	1,400	900	710	2,000
	07/25/00	8.77	114.43	1,700	11,000	3.21	52	20	55	120
	10/26/00	15.42	107.78	2,000	10,000	57	380	200	310	650
	01/17/01	8.75	114.45	4,900	4,100	19	190	39	170	310
	04/24/01	16.24	106.96	5,000	3,400	84	130	42	170	270
	07/31/01	11.11	112.09	4,600	3,900	<50	290	22	110	70
(122.57)	12/05/01	23.00	99.57	1,700	6,200	6.5	120	110	90	490
	01/31/02	23.00	99.57	1,100	370	<5	4.2	2.1	3	18.8
	04/17/02	18.10	104.47	1,100	910	74	35	16	9	62
	07/10/02	18.25	104.32	2,100	920	45	22	4	1	26
	10/10/02	18.16	104.41	2,100	120,024	52	1.1	4.7	<0.5	2.2
	01/13/03	5.18	117.39	4,200	1,600	<2	16	<5	18	12
	03/14/03	17.85	104.72	—	—	—	—	—	—	—
	04/16/03	14.50	108.07	520	<50	14	4	<1	<1	1
	07/16/03	18.50	104.07	2,300	1,100	67	66	4	26	13

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility #114
1855 Guerneville Road
Santa Rosa, California
(Page 3 of 9)

Well ID # (TOC)	Sample Date	DTW <——feet——>	Elev.	TPHd <———	TPHg	MTBE	B	T	E	X ———>
						ug/L				
MW2 (cont.)	10/21/03	14.69	107.88	5,800	2,700	100	190	9	140	29
(122.57)	04/06/04	14.69	107.88	<210	420	8.7	2.7	1.2	0.9	6
	12/31/04	**3.84**	**118.73**	**1,000**	**1,100**	**<1a**	**24a**	**1.5a**	**22a**	**7.6a**
MW3	09/01/89	14.14	92.74	—	—	—	—	—	—	—
(106.88)	10/06/89	—	—	—	85,700	—	720	2,640	720	7,860
	06/01/90	8.44	98.44	—	—	—	—	—	—	—
	11/15/90	—	—	1,300	16,000	—	1,000	420	<50	2,000
(122.73)	02/01/91	11.35	111.38	1,500	22,000	—	2,400	1,300	940	3,100
	03/01/91	9.83	112.90	—	—	—	—	—	—	—
	04/01/91	5.84	116.89	—	—	—	—	—	—	—
	05/16/91	9.48	113.25	1,400	21,000	—	1,800	1,000	710	2,300
	06/07/91	10.95	111.78	—	—	—	—	—	—	—
	07/01/91	7.20	115.53	—	—	—	—	—	—	—
	08/01/91	12.85	109.88	—	—	—	—	—	—	—
	08/16/91	14.15	108.58	960	16,000	—	1,400	730	120	1,200
	09/09/91	14.42	108.31	—	—	—	—	—	—	—
	10/04/91	14.57	108.16	—	—	—	—	—	—	—
	11/06/91	13.28	109.45	—	—	—	—	—	—	—
	12/06/91	12.34	110.39	3,600	19,000	—	2,300	1,000	690	1,900
	01/06/92	10.42	112.31	—	—	—	—	—	—	—
	02/19/92	5.79	116.94	—	—	—	—	—	—	—
	03/30/92	6.07	116.66	3,900	12,000	—	580	590	320	2,000
	04/23/92	7.46	115.27	—	—	—	—	—	—	—
	05/18/92	9.13	113.60	—	—	—	—	—	—	—
	06/16/92	10.51	112.22	21,000	17,000	—	2,100	1,300	620	2,000
	07/24/92	12.92	109.81	—	—	—	—	—	—	—
	08/18/92	13.04	109.69	—	—	—	—	—	—	—
	09/24/92	13.96	108.77	5,800	72,000	—	1,500	350	600	1,600
	10/21/92	13.40	109.33	—	—	—	—	—	—	—
	11/16/92	13.88	108.85	—	—	—	—	—	—	—
	12/16/92	8.40	114.33	140	250	—	<0.5	<0.5	<0.5	2
	01/13/93	5.73	117.00	—	—	—	—	—	—	—
	02/23/93	9.39	113.34	—	—	—	—	—	—	—
	03/17/93	8.82	113.91	790	2,300	—	380	130	48	130
	04/16/93	7.64	115.09	—	—	—	—	—	—	—
	05/14/93	7.57	115.16	—	—	—	—	—	—	—
	09/30/93	14.10	108.63	2,300	14,000	—	1,900	450	500	1,000
(122.72)	03/22/94	5.80	116.92	1,100	200	—	7.4	7.9	5	20
	09/22/94	—	—	—	—	—	—	—	—	—
	03/27/95	—	—	—	—	—	—	—	—	—
	08/30/95	—	—	—	—	—	—	—	—	—
	03/19/96	8.91	113.81	<50	920	—	41	24	25	66
	09/16/96	17.26	105.46	<100	9,500	—	710	500	380	1,200
	03/24/97	13.85	108.87	410	1,300	—	17	4.1	6.4	42
	09/29/97	13.63	109.09	<50	1,900	—	140	44	69	160
	04/30/98	5.22	117.50	<50	<50	—	<0.5	<0.5	<0.5	0.82
	07/30/98	9.29	113.43	2,100	16,000	32	320	450	540	1,600
	10/27/98	19.27	103.45	500	1,000	7	6	<0.5	2	3
	01/27/99	8.72	114.00	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/21/99	10.97	111.75	<50	72	18	2.1	1.4	2.6	10
	07/29/99	12.03	110.69	2608	920	19	50	30	38	110
	10/28/99	11.04	111.68	4908	2,200	<5.0	65	36	80	210
	02/04/00	5.12	117.60	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	04/27/00	4.90	117.82	<50	220	8.1	0.96	0.72	1.6	2.4
	07/25/00	9.62	113.10	110	160	6.7	16	2.7	4.2	2.9
	10/26/00	10.61	112.11	<50	2,100	12	86	6.3	31	9.8
	01/17/01	9.64	113.08	340	440	7.1	46	3.6	14	6.1
	04/24/01	5.46	117.26	61	93	<5.0	0.66	<0.5	<0.5	<0.5
	07/31/01	10.31	112.41	150	460	15	12	1.9	5.9	4.5
(123.26)	12/05/01	23.00	100.26	120	80	<5	0.89	0.52	<0.5	4.4
	01/31/02	23.00	100.26	<50	230	<5	7.3	2.6	10	22.6
	04/17/02	21.10	102.16	260	1,500	11	31	11	11	132
	07/10/02	11.45	111.81	160	1,400	32	53	100	49	245
	10/10/02	—	—	—	—	—	—	—	—	—

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility #114
1855 Guemeville Road
Santa Rosa, California
(Page 4 of 9)

Well ID # (TOC)	Sample Date	DTW	Elev.	TPHd	TPHg	MTBE	B	T	E	X
		<-----feet----->		<-----ug/L----->						
MW3 (cont.)	01/13/03	3.05	120.21	—	—	—	—	—	—	—
(123.26)	03/14/03	11.80	111.46	57	<50	<1	<0.5	<0.5	<0.5	<1
	04/16/03	11.30	111.96	<50	63	2	2	<1	1	4
	07/16/03	11.15	112.11	190	120	10	5	<1	4	5
	10/21/03	12.00	111.26	760	370	6	47	3	28	21
	04/06/04	12.00	111.26	<50	120	<0.5	1.3	0.7	2.4	6
	12/31/04	**4.91**	**118.35**	**<50**	**<50**	**<1a**	**<0.5a**	**<0.5a**	**<0.5a**	**<0.5a**
MW4	03/22/94	6.45	116.19	1,500	5,900	—	150	110	130	420
(122.64)	09/22/94	11.54	111.10	70	4,600	—	360	130	220	370
	03/27/95	5.40	117.24	220	970	—	180	26	28	61
	08/30/95	10.35	112.29	280	3,800	—	300	110	180	280
	03/19/96	5.70	116.94	<50	860	—	58	4.1	41	25
	09/16/96	12.90	109.74	<50	520	—	33	18	14	28
	03/24/97	6.06	116.58	170	70	—	1.2	1.4	<0.5	2
	09/29/97	10.97	111.67	<50	110	—	2.4	2.7	1.8	13
	04/30/98	5.56	117.08	<50	3,100	—	68	1.6	81	22
	07/30/98	6.83	115.81	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	10/27/98	11.21	111.43	<50	320	3	1	0.8	1	2
	01/27/99	6.07	116.57	<50	<50	<5.0	0.7	<0.5	<0.5	<0.5
	04/21/99	5.50	117.14	<50	<50	7.2	<0.5	<0.5	<0.5	<0.5
	07/29/99	6.47	116.17	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	10/28/99	9.80	112.84	<50	55	<0.5	<0.5	<0.5	<0.5	1.3
	02/04/00	5.85	116.79	<50	<50	<0.5	<0.5	0.6	0.5	2.3
	04/27/00	5.67	116.97	<50	<50	6.1	<0.5	<0.5	<0.5	<0.5
	07/25/00	10.00	112.64	120	460	13	3.5	1.3	0.6	1.8
	10/26/00	10.91	111.73	<50	1,500	14	17	2.4	6.6	12
	01/17/01	10.21	112.43	310	410	<5.0	8.2	4.3	2.1	10
	04/24/01	6.35	116.29	<50	<50	<5.0	<0.5	0.65	<0.5	<0.5
	07/31/01	11.06	111.58	74	800	50	7	1.9	0.7	1.7
(123.33)	12/05/01	5.21	118.12	50	170	<5	13	4.3	5.6	7.2
	01/31/02	12.50	110.83	60	<50	<5	<0.5	<0.5	<0.5	<0.5
	04/17/02	10.10	113.23	<50	900	3	140	200	18	86
	07/10/02	12.63	110.70	100	170	31	17	13	4	14
	10/10/02	—	—	—	—	—	—	—	—	—
	01/13/03	4.92	118.41	270	1,500	4.1	32	10	<5	21
	03/14/03	6.26	117.07	—	—	—	—	—	—	—
	04/16/03	5.89	117.44	<50	<50	6	<1	<1	<1	1
	07/16/03	10.21	113.12	<50	<50	5	5	9	1	8
	10/21/03	13.00	110.33	<54	250	1	<1	<1	<1	<1
	04/06/04	6.29	117.04	<50	75	1.8	5.9	6	1.4	17.4
	12/31/04	**5.03**	**118.30**	**<50**	**61**	**<1a**	**<0.5a**	**<0.5a**	**<0.5a**	**0.77a**
MW5	03/30/92	8.58	113.56	410	970	—	<0.5	<0.5	1.8	5.8
(122.14)	04/23/92	10.5	111.64	—	—	—	—	—	—	—
	05/18/92	10.92	111.22	—	—	—	—	—	—	—
	06/16/92	11.67	110.47	—	—	—	—	—	—	—
	07/24/92	—	—	—	—	—	—	—	—	—
	08/18/92	—	—	—	—	—	—	—	—	—
	09/24/92	—	—	—	—	—	—	—	—	—
	10/21/92	—	—	—	—	—	—	—	—	—
	11/16/92	—	—	—	—	—	—	—	—	—
	12/16/92	10.19	111.95	<50	<50	—	<0.5	<0.5	<0.5	<0.5
	01/13/93	4.74	117.40	—	—	—	—	—	—	—
	02/23/93	10.93	111.21	—	—	—	—	—	—	—
	03/17/93	6.85	115.29	690	<50	—	<0.5	<0.5	<0.5	<0.5
	04/16/93	10.61	111.53	—	—	—	—	—	—	—
	05/14/93	7.73	114.41	—	—	—	—	—	—	—
	09/30/93	—	—	—	—	—	—	—	—	—
(122.14)	03/22/94	10.87	111.27	660	90	—	2.7	<0.5	1	6.5
	09/22/94	11.98	110.16	—	—	—	—	—	—	—
	03/27/95	4.75	117.39	110	140	—	20	27	7.3	45
	08/30/95	9.86	112.28	50	<50	—	<0.5	<0.5	<0.5	<0.5
	03/19/96	10.21	111.93	<50	290	—	22	24	10	44
	09/16/96	—	—	—	—	—	—	—	—	—
	03/24/97	—	—	—	—	—	—	—	—	—
	09/29/97	—	—	—	—	—	—	—	—	—
	04/30/98	—	—	—	—	—	—	—	—	—
	07/30/98	—	—	—	—	—	—	—	—	—

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility #114
1855 Guemeville Road
Santa Rosa, California

Well ID # (TOC)	Sample Date	DTW <-----feet----->	Elev.	TPHd <-----	TPHg	MTBE	B	T	E	X ----->
						ug/L				
MW5 (cont.)	10/27/98	—	—	—	—	—	—	—	—	—
(122.14)	01/27/99	—	—	—	—	—	—	—	—	—
	04/21/99	—	—	—	—	—	—	—	—	—
		Well								
MW6	03/30/92	7.38	115.48	14,000	69,000	—	11,000	19,000	1,400	16,000
(122.86)	04/23/92	7.63	115.23	—	—	—	—	—	—	—
	05/18/92	8.62	114.24	—	—	—	—	—	—	—
	06/16/92	9.97	112.89	<50	73,000	—	5,900	1,400	2,400	6,700
	07/24/92	11.72	111.14	—	—	—	—	—	—	—
	08/18/92	11.93	110.93	—	—	—	—	—	—	—
	09/24/92	—	—	—	—	—	—	—	—	—
	10/21/92	—	—	—	—	—	—	—	—	—
	11/16/92	—	—	—	—	—	—	—	—	—
	12/16/92	10.9	111.96	17,000	61,000	—	6,700	8,700	770	9,100
	01/13/93	6.67	116.19	—	—	—	—	—	—	—
	02/23/93	10.65	112.21	—	—	—	—	—	—	—
	03/17/93	8.68	114.18	1,800	2,800	—	360	140	17	580
	04/16/93	7.45	115.41	—	—	—	—	—	—	—
	05/14/93	7.48	115.38	—	—	—	—	—	—	—
	09/30/93	—	—	—	—	—	—	—	—	—
	03/22/94	7.03	115.83	22,000	5,000	—	620	92	290	660
	09/22/94	12.24	110.62	—	—	—	—	—	—	—
	03/27/95	8.61	114.25	6,300	18,000	—	3,900	2,000	1,000	3,200
	08/30/95	10.3	112.56	—	28,000	—	3,200	290	1,500	2,500
	03/19/96	8.21	114.65	<100	20,000	—	3,600	780	1,300	2,500
	09/16/96	—	—	—	—	—	—	—	—	—
	03/24/97	—	—	—	—	—	—	—	—	—
	09/29/97	—	—	—	—	—	—	—	—	—
	04/30/98	—	—	—	—	—	—	—	—	—
	07/30/98	—	—	—	—	—	—	—	—	—
	10/27/98	—	—	—	—	—	—	—	—	—
	01/27/99	—	—	—	—	—	—	—	—	—
	04/21/99	8.38	114.48	1908	3,600	<5.0	300	41	150	150
	07/29/99	—	—	—	—	—	—	—	—	—
	04/27/00	7.51	115.35	<50	1,400	18	71	15	21	13
		Well								
MW7	03/30/92	5.53	118.00	5,040	86,000	—	20,000	22,000	3,200	14,000
(123.53)	04/23/92	6.57	116.96	—	—	—	—	—	—	—
	05/18/92	7.66	115.87	—	—	—	—	—	—	—
	06/16/92	—	—	—	—	—	—	—	—	—
	06/22/92	—	—	<50	310,000	—	24,000	30,000	7,000	30,000
	07/24/92	12.03	111.50	—	—	—	—	—	—	—
	08/18/92	12.14	111.39	—	—	—	—	—	—	—
	09/24/92	12.83	110.70	32,000	110,000	—	23,000	27,000	3,300	16,000
	10/21/92	12.63	110.90	—	—	—	—	—	—	—
	11/16/92	12.71	110.82	—	—	—	—	—	—	—
	12/16/92	7.75	115.78	11,000	67,000	—	12,000	15,000	1,100	7,800
	01/13/93	5.40	118.13	—	—	—	—	—	—	—
	02/23/93	10.81	112.72	—	—	—	—	—	—	—
	03/17/93	7.67	115.86	12,000	48,000	—	10,000	14,000	1,400	7,800
	04/16/93	6.35	117.18	—	—	—	—	—	—	—
	05/14/93	8.38	115.15	—	—	—	—	—	—	—
	09/30/93	13.45	110.08	14,000	74,000	—	7,600	11,000	1,400	7,700
(123.50)	03/22/94	6.20	117.30	27,000	63,000	—	7,600	12,000	1,100	8,300
	09/22/94	13.70	109.80	1,100	76,000	—	11,000	13,000	1,500	8,900
	03/27/95	3.87	119.63	—	—	—	—	—	—	—
	08/30/95	9.14	114.36	5,400	100,000	—	16,000	4,800	2,600	13,000
	03/19/96	6.19	117.31	<250	64,000	—	9,000	9,800	1,600	8,300
	09/16/96	13.83	109.67	<500	50,000	—	5,500	6,800	1,600	7,100
	03/24/97	13.50	110.00	4,600	68,000	—	5,800	9,600	2,700	11,000
	09/29/97	13.42	110.08	3,600	21,000	—	1,700	1,900	910	3,800
	04/30/98	7.60	115.90	290	16,000	—	1,300	1,300	630	2,300
	07/30/98	13.07	110.43	660	18,000	20	310	560	530	2,000
	10/27/98	13.98	109.52	4	11,000	54	780	460	310	1,500
	01/27/99	13.58	109.92	<50	32,000	360	1,500	1,900	1,100	3,700
	04/21/99	5.65	117.85	510	15,000	130	800	510	410	1,400
	07/29/99	10.85	112.65	1,900	7,000	150	330	120	330	810
	10/28/99	13.68	109.82	1,300	11,000	<5.0	300	32	630	1,500

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility #114
1855 Guerneville Road
Santa Rosa, California
(Page 6 of 9)

Well ID # (TOC)	Sample Date	DTW	Elev.	TPHd	TPHg	MTBE	B	T	E	X
		<——feet——>		<——ug/L——>						
MW7 (cont.)	02/04/00	13.56	109.94	<50	26,000	980	980	1,300	710	2,800
(123.50)	04/27/00	9.56	113.94	490	3,000	1,100	110	32	170	290
	07/25/00	—	—	—	—	—	—	—	—	—
	10/26/00	10.60	112.90	<50	1,100	<0.5	34	19	21	74
	01/17/01	10.14	113.36	1,100	600	<5.0	5.1	2.2	12	17
	04/24/01	13.26	110.24	5,300	10,000	<250	580	990	610	2,100
	07/31/01	11.77	111.73	390	750	16	16	8.6	24	38
(124.46)	12/05/01	27.00	97.46	150	610	33	81	46	18	82
	01/31/02	27.00	97.46	260	1,400	22	72	43	5.5	191
	04/17/02	25.80	98.66	460	1,500	29	37	67	12	320
	07/10/02	25.85	98.61	340	1,700	36	55	130	60	292
	10/10/02	25.80	98.66	380	670	21	4.8	6.4	1.1	20
	01/13/03	7.91	116.55	1,900	9,800	14	360	230	470	1,500
	03/14/03	25.80	98.66	—	—	—	—	—	—	—
	04/16/03	25.80	98.66	<50	<50	14	<1	<1	<1	<1
	07/16/03	25.80	98.66	110	<50	15	1	<1	<1	<1
	10/21/03	25.80	98.66	<50	<50	2	<1	<1	<1	<1
	04/06/04	25.80	98.66	1,700	3,700	7.2	150	82	200	437
	12/31/04	**8.17**	**116.29**	**<50**	**3,200**	**<2a**	**150a**	**66a**	**120a**	**210a**
MW8	03/30/92	6.00	118.10	9,090	22,000	—	860	3,200	580	4,000
(124.10)	04/23/92	6.89	117.21	—	—	—	—	—	—	—
	05/18/92	9.00	115.10	—	—	—	—	—	—	—
	06/16/92	11.71	112.39	<50	83,000	—	10,000	16,000	1,900	8,500
	07/24/92	14.51	109.59	—	—	—	—	—	—	—
	08/18/92	14.65	109.45	—	—	—	—	—	—	—
	09/24/92	15.58	108.52	—	—	—	—	—	—	—
	10/21/92	15.43	108.67	—	—	—	—	—	—	—
	11/16/92	5.46	118.64	—	—	—	—	—	—	—
	12/16/92	7.73	116.37	—	—	—	—	—	—	—
	01/13/93	5.30	118.80	—	—	—	—	—	—	—
	02/23/93	10.31	113.79	—	—	—	—	—	—	—
	03/17/93	7.67	116.43	—	—	—	—	—	—	—
	04/16/93	6.56	117.54	—	—	—	—	—	—	—
	05/14/93	8.13	115.97	—	—	—	—	—	—	—
	09/30/93	15.10	109.00	35,000	110,000	—	12,000	34,000	4,000	22,000
(123.95)	03/22/94	5.10	118.85	460,000	69,000	—	1,400	12,000	2,800	15,000
	09/22/94	13.86	110.09	4,600	66,000	—	2,300	8,400	1,900	10,000
	03/27/95	3.25	120.70	—	—	—	—	—	—	—
	08/30/95	11.05	112.90	—	—	—	—	—	—	—
	03/19/96	4.08	119.87	<50	5,800	—	5.3	130	91	480
	09/16/96	14.49	109.46	<500	18,000	—	110	810	320	2,900
	03/24/97	5.58	118.37	8,600	20,000	—	40	45	67	170
	09/29/97	13.29	110.66	640	1,200	—	19	1.1	2.2	5.6
	04/30/98	5.55	118.40	<50	260	—	0.87	<0.5	1.1	1.9
	07/30/98	10.42	113.53	250	6,100	<5.0	33	150	100	410
	10/27/98	15.41	108.54	59	6,900	2	9	20	42	240
	01/27/99	5.42	118.53	<50	600	<5.0	<0.5	1.4	1.3	8.9
	04/21/99	7.70	116.25	100	2,100	7.7	4.3	0.76	4.1	37
	07/29/99	11.01	112.94	1,300	9,800	88	24	60	130	630
	10/28/99	16.98	106.97	—	24,000	<50	<50	310	330	1,500
	02/04/00	10.78	113.17	160,000	2,200,000	<500	<500	7,200	9,600	82,000
	03/09/00	—	—	3,300	9,600	90	27	200	140	690
	03/09/00	—	—	3,100	12,000	260	<50	260	150	800
	04/27/00	14.82	109.13	12,000	47,000	240	130	760	590	2,100
	07/25/00	12.50	111.45	2,200	16,000	<10	55	29	68	210
	10/26/00	—	—	530,000	110,000	<550	<550	<550	900	3,400
	01/17/01	15.57	108.38	83,000	1,400	<50	52	55	24	150
	04/24/01	8.10	115.85	55,000	43,000	<500	<50	300	450	3,100
	07/31/01	14.31	109.64	7,000	11,000	<250	93	100	69	210
(124.07)	12/05/01	27.00	97.07	81	380	<5	3	5.1	2.1	28
	01/31/02	27.00	97.07	<50	<50	<5	<0.5	<0.5	<0.5	<0.5
	04/17/02	20.05	104.02	1,000	3,100	<1	30	5	1	207
	07/10/02	25.82	98.25	1,100	3,200	2	340	52	13	450
	10/10/02	25.80	98.27	2,000	11,000	<25	550	220	130	370
	01/13/03	3.60	120.47	880	150	<1	<0.5	<0.5	<0.5	4.6
	03/14/03	25.80	98.27	—	—	—	—	—	—	—
	04/16/03	7.61	116.46	7,400	1,300	<1	41	22	6	86

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Redwood Oil Company Facility #114
1855 Guerneville Road
Santa Rosa, California
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Well ID # (TOC)	Sample Date	DTW <——feet——>	Elev.	TPHd <——ug/L——>	TPHg	MTBE	B	T	E	X
MW8 (cont.)	07/16/03	25.80	98.27	32,000	750	3	26	24	8	91
(124.07)	10/21/03	25.80	98.27	1,600	4,600	<1	8	59	8	470
	04/06/04	25.80	98.27	<50	61	<0.5	<0.5	<0.5	<0.5	1.4
	12/31/04	**3.70**	**120.37**	**<50**	**<50**	**<1a**	**<0.5a**	**<0.5a**	**<0.5a**	**<0.5a**
MW9	03/22/94	5.74	116.83	150,000	47,000	—	810	2,800	900	11,000
(122.57)	09/22/94	8.40	114.17	4,100	52,000	—	900	1,300	1,600	7,700
	03/27/95	5.15	117.42	—	—	—	—	—	—	—
	08/30/95	7.20	115.37	5,500	19,000	—	380	220	520	2,100
	03/19/96	5.43	117.14	5,000	9,000	—	150	140	170	670
	09/16/96	12.98	109.59	2,000	6,500	—	560	720	220	1,100
	03/24/97	6.42	116.15	290	250	—	7.6	1.3	2.5	12
	09/29/97	12.53	110.04	1,200	2,700	—	170	60	1.5	520
	04/30/98	5.17	117.40	<50	350	—	11	<0.5	7.7	22
	07/30/98	7.01	115.56	360	<500	<5.0	21	<5	<5	6.8
	10/27/98	8.80	113.77	<50	330	2	<0.5	<0.5	<0.5	<1
	01/27/99	6.06	116.51	<50	100	7.7	8.9	<0.5	1.1	<0.5
	04/21/99	5.97	116.60	<50	<50	6.6	3.2	<0.5	<0.5	1.1
	07/29/99	6.24	116.33	538	120	<5.0	0.9	0.8	0.8	1.6
	10/28/99	11.50	111.07	<50	78	<0.5	<0.5	1	<0.5	1.7
	02/04/00	6.10	116.47	<50	200	<0.5	8.5	2.8	<0.5	3.2
	04/27/00	5.12	117.45	<50	110	11	3.6	1.2	<0.5	<0.5
	07/25/00	6.67	115.90	180	900	3.1	15	1.9	13	19
	10/26/00	6.56	116.01	<50	510	<0.5	8.2	0.8	1.5	0.6
	01/17/01	9.11	113.46	2,100	290	<5.0	5.4	3.8	1.6	8.8
	04/24/01	6.31	116.26	200	160	<5.0	9.6	0.78	2.2	1.6
	07/31/01	10.95	111.62	100	160	5	1.9	0.9	<0.5	3.3
(123.60)	12/05/01	5.21	118.39	570	570	<5	72	6.5	9.2	17
	01/31/02	8.50	115.10	520	820	<5	<5	<5	<5	<5
	04/17/02	12.51	111.09	54	290	1	46	67	6	25
	07/10/02	13.55	110.05	350	220	<1	6	5	2	6
	10/10/02	14.11	109.49	1,200	3,100	<10	<25	<25	98	280
	01/13/03	4.32	119.28	470	580	<2	27	5.3	3.2	9.2
	03/14/03	8.05	115.55							
	04/16/03	7.21	116.39	93	87	<1	7	<1	<1	1
	07/16/03	9.07	114.53	450	430	7	<1	<1	<1	4
	10/21/03	12.88	110.72	76	140	2	<1	<1	<1	1
	04/06/04	6.82	116.78	51	99	1.1	5.4	4.9	1.2	15.6
	12/31/04	**4.88**	**118.72**	**<50**	**14,000**	**<10a**	**320a**	**560a**	**420a**	**1,500a**
MW10	11/11/99	15.03	107.49	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
(122.52)	02/04/00	11.30	111.22	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	04/27/00	11.98	110.54	<50	<50	7.4	<0.5	<0.5	<0.5	<0.5
	07/25/00	14.60	107.92	120	<50	<2.0	<0.5	<0.5	<0.5	<0.5
	10/26/00	15.83	106.69	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	01/17/01	13.00	109.52	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/24/01	—	—	—	—	—	—	—	—	—
	08/06/01	16.21	106.31	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
(123.85)	12/05/01	9.40	114.45	150	<50	<5	<0.5	<0.5	<0.5	<0.5
	01/31/02	8.12	115.73	<50	<50	<5	<0.5	<0.5	<0.5	0.76
	04/17/02	10.90	112.95	<50	370	<1	93	95	6	18
	07/10/02	15.70	108.15	<50	<50	<1	<1	<1	<1	<1
	10/10/02	16.85	107.00	<50	<50	<5	2.7	2.4	1.2	3.7
	01/13/03	5.75	118.10	140	<50	<1	<0.5	<0.5	<0.5	<1
	03/14/03	7.67	116.18	—	—	—	—	—	—	—
	04/16/03	8.49	115.36	<50	<50	<1	<1	<1	<1	<1
	07/16/03	12.80	111.05	<50	<50	<1	<1	<1	<1	<1
	10/21/03	14.79	109.06	<53	<50	<1	<1	<1	<1	<1
	04/06/04	8.30	115.55	<250	<50	<0.5	<0.5	<0.5	<0.5	<1
	12/31/04	**6.46**	**117.39**	**<50**	**<50**	**<1a**	**<0.5a**	**<0.5a**	**<0.5a**	**<0.5a**
MW11	12/05/01	5.20	-130.58	<50	200	<5	<0.5	<0.5	<0.5	<0.5
(125.38)	01/31/02	7.48	-132.86	<50	<50	<5	<0.5	<0.5	<0.5	0.71
	04/17/02	11.16	-136.54	<50	370	<1	72	99	8	37
	07/10/02	15.09	-140.47	<50	61	2	11	7	2	6
	10/10/02	16.47	-141.85	<50	<50	<5	4.4	3.5	1.6	5.2
	01/13/03	5.91	-131.29	<50	68	<1	12	5.5	1.2	8.6
	03/14/03	7.22	-132.60	—	—	—	—	—	—	—
	04/16/03	6.52	-131.90	<50	<50	<1	<1	<1	<1	<1

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility #114
1855 Guemeville Road
Santa Rosa, California
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Well ID # (TOC)	Sample Date	DTW	Elev.	TPHd	TPHg	MTBE	B	T	E	X
		<-----feet----->		<-----ug/L----->						
MW11 (cont.)	07/16/03	11.51	113.87	<50	<50	2	4	7	<1	7
(125.38)	10/21/03	14.26	111.12	<50	<50	<1	<1	<1	<1	<1
	04/06/04	6.47	118.91	<50	71	2.3	6.5	5.6	1.2	15.9
	12/31/04	**4.89**	**120.49**	**<50**	**<50**	**<1a**	**<0.5a**	**<0.5a**	**<0.5a**	**<0.5**
V1	12/05/01	5.30	-130.13	—	—	—	—	—	—	—
(124.83)	01/31/02	5.86	-130.69	—	—	—	—	—	—	—
	04/17/02	8.00	-132.83	—	—	—	—	—	—	—
	07/10/02	9.10	-133.93	—	—	—	—	—	—	—
	10/10/02	9.80	-134.63	—	—	—	—	—	—	—
	01/13/03	4.24	-129.07	—	—	—	—	—	—	—
	03/14/03	5.87	-130.70	—	—	—	—	—	—	—
	04/16/03	7.80	-132.63	—	—	—	—	—	—	—
	07/16/03	8.09	-132.92	—	—	—	—	—	—	—
	10/21/03	10.09	-134.92	—	—	—	—	—	—	—
	04/06/04	6.01	-130.84	—	—	—	—	—	—	—
	12/31/04	**3.30**	**-128.13**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
V2	12/05/01	5.30	-129.93	—	—	—	—	—	—	—
(124.63)	01/31/02	5.43	-130.06	—	—	—	—	—	—	—
	04/17/02	8.20	-132.83	—	—	—	—	—	—	—
	07/10/02	9.00	-133.63	—	—	—	—	—	—	—
	10/10/02	10.72	-135.35	—	—	—	—	—	—	—
	01/13/03	4.25	-128.88	—	—	—	—	—	—	—
	03/14/03	5.85	-130.48	—	—	—	—	—	—	—
	04/16/03	5.82	-130.45	—	—	—	—	—	—	—
	07/16/03	7.98	-132.61	—	—	—	—	—	—	—
	10/21/03	9.98	-134.61	—	—	—	—	—	—	—
	04/06/04	6.02	-130.65	—	—	—	—	—	—	—
	12/31/04	**4.42**	**-129.05**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
V3	12/05/01	5.05	-129.36	—	—	—	—	—	—	—
(124.31)	01/31/02	5.35	-129.66	—	—	—	—	—	—	—
	04/17/02	7.75	-132.06	—	—	—	—	—	—	—
	07/10/02	8.52	-132.83	—	—	—	—	—	—	—
	10/10/02	10.55	-134.86	—	—	—	—	—	—	—
	01/13/03	3.91	-128.22	—	—	—	—	—	—	—
	03/14/03	5.68	-129.99	—	—	—	—	—	—	—
	04/16/03	5.52	-129.83	—	—	—	—	—	—	—
	07/16/03	7.46	-131.77	—	—	—	—	—	—	—
	10/21/03	9.46	-133.77	—	—	—	—	—	—	—
	04/06/04	5.74	-130.05	—	—	—	—	—	—	—
	12/31/04	**4.37**	**-128.68**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
V4	12/05/01	7.05	-131.86	—	—	—	—	—	—	—
(124.81)	01/31/02	7.30	-132.11	—	—	—	—	—	—	—
	04/17/02	8.07	-132.88	—	—	—	—	—	—	—
	07/10/02	9.31	-134.12	—	—	—	—	—	—	—
	10/10/02	8.75	-133.56	—	—	—	—	—	—	—
	01/13/03	6.51	-131.32	—	—	—	—	—	—	—
	03/14/03	7.30	-132.11	—	—	—	—	—	—	—
	04/16/03	7.14	-131.95	—	—	—	—	—	—	—
	07/16/03	8.11	-132.92	—	—	—	—	—	—	—
	10/21/03	10.11	-134.92	—	—	—	—	—	—	—
	04/06/04	7.16	-131.97	—	—	—	—	—	—	—
	12/31/04	**6.26**	**-131.07**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
DW2050	04/21/99	—	—	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	08/11/99	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	10/28/99	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	02/04/00	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	05/01/00	—	—	<50	<50	<2.0	<0.5	<0.5	<0.5	<0.5
	07/25/00	—	—	<50	<50	<2.0	<0.5	<0.5	<0.5	<0.5
	10/26/00	—	—	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	01/17/01	—	—	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	04/24/01	—	—	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	07/31/01	—	—	<50	<50	<5.0	<0.5	<0.5	<0.5	<0.5
	12/05/01	—	—	<50	<50	<5	<0.5	<0.5	<0.5	<0.5
	01/31/02	—	—	<50	<50	<5	<0.5	<0.5	<0.5	<0.5

TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Facility 114
1855 Guemeville Road
Santa Rosa, California
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Well ID # (TOC)	Sample Date	DTW <——feet——>	Elev.	TPHd <——ug/L——>	TPHg	MTBE	B	T	E	X
DW2050	04/17/02	—	—	<50	<50	2	<1	<1	<1	<1
(cont.)	05/24/02	—	—	<50	<50	<5	0.5	0.5	0.5	<1
	07/10/02	—	—	<50	<50	4	<1	<1	<1	<1
	08/07/02	—	—	<50	<50	<5	0.5	0.5	0.5	<1
	10/10/02	—	—	<50	<50	5.7	0.5	0.5	0.5	<1
	01/13/03	—	—	<50	<50	4.4	0.5	0.5	0.5	<1
	04/16/03	—	—	<50	<50	4	<1	<1	<1	<1
	07/16/03	—	—	<50	<50	9	<1	<1	<1	<1
	10/21/03	—	—	<50	<50	11	<1	<1	<1	<1
	04/06/04	—	—	<50	<50	6.4	0.5	0.5	0.5	<1
	12/31/04	**—**	**—**	**<50**	**<50**	**27**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
DW2075	07/24/01	—	—	<50	<50	5	0.5	0.5	0.5	0.5
	12/05/01	—	—	<50	<50	<5	0.5	0.5	0.5	0.5
	01/31/02	—	—	<50	<50	<5	0.5	0.5	0.5	0.5
	04/17/02	—	—	<50	<50	<1	<1	<1	<1	<1
	07/10/02	—	—	<50	<50	<1	<1	<1	<1	<1
	10/10/02	—	—	<50	<50	<5	0.5	0.5	0.5	<1
	01/13/03	—	—	<50	<50	<1	0.5	0.5	0.5	<1
	04/16/03	—	—	<50	<50	<1	<1	<1	<1	<1
	07/16/03	—	—	<50	<50	<1	<1	<1	<1	<1
	10/21/03	—	—	<50	<50	<1	<1	<1	<1	<1
	04/06/04	—	—	<50	<50	0.5	0.5	0.5	0.5	<1
	12/31/04	**—**	**—**	**<50**	**<50**	**1.1**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Notes:

Data collected prior to April, 2004 compiled from the ECM Group *Systems Operations Report* dated July 9, 2004.

TOC	=	Elevation of top of well casing; relative to mean sea level.
DTW	=	Depth to water.
Elev.	=	Elevation of groundwater above mean sea level.
TPHd	=	Total petroleum hydrocarbons as diesel.
TPHg	=	Total petroleum hydrocarbons as gasoline.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8021B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-Dichloroethane analyzed using EPA Method 8260B.
EDB	=	1,2-Dibromoethane analyzed using EPA Method 8260B.
Ethanol	=	Ethanol analyzed using EPA Method 8260B.
ug/L	=	Micrograms per liter.
—	=	Not analyzed/Not measured.
<	=	Analytes not detected at or above the laboratory reporting limit.
a	=	Analyzed using EPA Method 8260B.

TABLE 1B

ADDITIONAL CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA

Redwood Oil Company Facility #114
1855 Guerneville Road
Santa Rosa, California
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Well ID #	Sample Date	ETBE	TBA	DIPE	TAME	1,2-DCA	EDB	Ethanol
		<----------	----------	----------	ug/L	----------	----------	---------->
MW1	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
MW2	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
MW3	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
MW4	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
MW7	12/31/04	<10	<20	<10	<10	<1	<1	<200
MW8	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
MW9	12/31/04	<50	<100	<50	<50	<5	<5	<1,000
MW10	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
MW11	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
DW2050	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100
DW2075	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100

Notes:

Data collected prior to April, 2004 compiled from the ECM Group *Systems Operations Report* dated July 9, 2004.

TOC	=	Elevation of top of well casing; relative to mean sea level.
DTW	=	Depth to water.
Elev.	=	Elevation of groundwater above mean sea level.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015M.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015M.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8021B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-Dichloroethane analyzed using EPA Method 8260B.
EDB	=	1,2-Dibromoethane analyzed using EPA Method 8260B.
Ethanol	=	Ethanol analyzed using EPA Method 8260B.
ug/L	=	Micrograms per liter.
—	=	Not analyzed/Not measured.
<	=	Analytes not detected at or above the laboratory reporting limit.
a	=	Analyzed using EPA Method 8260B.

TABLE 2
OPERATIONAL AND PERFORMANCE DATA FOR GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
Redwood Oil Facility #114
1855 Guerneville Road
Santa Rosa, California
(Page 1 of 4)

Date	Effluent Totalizer [gal]	Total Flow [gal]	Average Flowrate [gpm]	Sample ID	TPHg	TPHd	B	T	E	X	MTBE	TPHg Removed Per Period	TPHg Removed Cumulative	MTBE Removed Per Period	MTBE Removed Cumulative
					<-----µg/L----->							<-----lbs.----->			
08/25/00	843,868	843,868													
09/06/00	852,993	852,993	0.53												
10/16/00	889,872	889,872	0.64												
10/26/00	894,456	894,456	0.32												
11/03/00	898,920	898,920	0.39												
11/08/00	898,920	898,920	0.00												
12/06/00	1,159,312	1,159,312	6.46												
12/15/00	1,217,200	1,217,200	4.47												
01/12/01	1,262,700	1,262,700	1.13												
01/17/01	1,338,945	1,338,945	10.59												
02/08/01	1,342,275	1,342,275	0.11												
02/26/01	1,342,275	1,342,275	0.00												
03/12/01	1,342,275	1,342,275	0.00												
03/15/01	1,353,659	1,353,659	2.64		780	—	4.7	29	8.7	74.00	3				
03/23/01	1,355,455	1,355,455	0.16												
04/24/01	1,441,655	1,441,655	1.87												
11/29/01	14,281	1,455,936	0.28												
12/05/01	42,000	1,483,655	3.21												
12/19/01	246,801	1,688,456	10.16												
01/10/02	287,302	1,728,957	1.28												
01/15/02	300,738	1,742,393	1.87												
01/29/02	300,789	1,742,444	0.00												
02/07/02	361,612	1,803,267	4.69												
02/12/02		1,803,267			250	130	9.9	9	5.3	26.00	8	0.47	0.47	0.00	0.010
02/15/02	393,856	1,835,511	2.80												
02/21/02	424,568	1,866,223	3.55												
02/25/02	443,799	1,885,454	3.34												
03/05/02	468,183	1,909,838	2.12												
03/11/02	505,098	1,946,753	4.27												
03/20/02	551,849	1,993,504	3.61												
03/28/02	579,705	2,021,360	2.42												
04/02/02	605,749	2,047,404	3.62												
04/08/02	632,371	2,074,026	3.08												
04/17/02	668,277	2,109,932	2.77												
04/24/02	692,877	2,134,532	2.44												
05/06/02		2,134,532			1100	3000	2.8	8	<1.25	21.00	29	1.88	2.33	0.05	0.052
06/19/02	693,029	2,134,684	0.00												
06/28/02	712,038	2,153,693	1.47												
07/02/02	716,941	2,158,596	0.85												
07/10/02	728,258	2,169,913	0.98												
07/16/02	735,194	2,176,849	0.80												

TABLE 2
OPERATIONAL AND PERFORMANCE DATA FOR GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
Redwood Oil Facility #114
1855 Guerneville Road
Santa Rosa, California
(Page 2 of 4)

Date	Effluent Totalizer [gal]	Total Flow [gal]	Average Flowrate [gpm]	Sample ID	TPHg	TPHd	B	T	E	X	MTBE	TPHg Removed Per Period	TPHg Removed Cumulative	MTBE Removed Per Period	MTBE Removed Cumulative
					<----------			µg/L			---------->	<----------		lbs.	---------->
07/19/02	739,515	2,181,170	1.00												
07/23/02	744,634	2,186,289	0.89												
07/29/02	748,651	2,190,306	0.46												
08/07/02	759,332	2,200,987	0.82		700	340	28	9	2.8	44.00	10	0.50	2.83	0.01	0.062
08/15/02	767,593	2,209,248	0.72												
08/21/02	774,911	2,216,566	0.85												
08/30/02	785,388	2,227,043	0.81												
09/04/02	791,259	2,232,914	0.82												
09/13/02	801,484	2,243,139	0.79												
09/19/02	808,220	2,249,875	0.78												
09/29/02	815,900	2,257,555	0.53												
10/02/02	822,900	2,264,555	1.62												
10/10/02	831,174	2,272,829	0.72												
10/18/02	831,188	2,272,843	0.00												
10/25/02	831,439	2,273,094	0.02												
10/30/02	837,624	2,279,279	0.86												
11/05/02	843,960	2,285,615	0.73		130	150	1.3	<0.5	<0.5	2.20	9	0.29	3.12	0.01	0.069
11/21/02	847,216	2,288,871	0.14												
11/27/02	855,167	2,296,822	0.92												
12/06/02	866,774	2,308,429	0.90												
12/13/02	876,287	2,317,942	0.94												
12/17/02	888,451	2,330,106	2.11												
12/27/02	916,240	2,357,895	1.93												
01/24/03	917,807	2,359,462	0.04												
01/28/03	935,181	2,376,836	3.02												
02/05/03	935,181	2,376,836	0.00												
02/07/03	946,481	2,388,136	3.92												
02/12/03	962,200	2,403,855	2.18												
02/20/03	984,662	2,426,317	1.95		110	190	2.9	1	1.6	4.70	7	0.14	3.26	0.01	0.079
02/28/03	1,007,365	2,449,020	1.97												
03/04/03	1,017,703	2,459,358	1.79												
03/11/03	1,035,026	2,476,681	1.72												
03/18/03	1,052,836	2,494,491	1.77												
03/27/03	1,075,172	2,516,827	1.72												
04/04/03	1,075,172	2,516,827	0.00												
04/10/03	1,091,686	2,533,341	1.91												
04/16/03	1,106,350	2,548,005	1.70												
04/24/03	1,127,879	2,569,534	1.87												
05/02/03	1,149,901	2,591,556	1.91												
05/08/03	1,158,417	2,600,072	0.99												
05/14/03	1,168,433	2,610,088	1.16		91	1300	1.9	1	0.7	3.40	7	0.15	3.42	0.01	0.090
05/22/03	1,188,933	2,630,588	1.78												
05/29/03	1,188,935	2,630,590	0.00												
06/06/03	1,204,092	2,645,747	1.32												

TABLE 2
OPERATIONAL AND PERFORMANCE DATA FOR GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
Redwood Oil Facility #114
1855 Guerneville Road
Santa Rosa, California
(Page 3 of 4)

Date	Effluent Totalizer [gal]	Total Flow [gal]	Average Flowrate [gpm]	Sample ID	TPHg	TPHd	B	T	E	X	MTBE	TPHg Removed Per Period	TPHg Removed Cumulative	MTBE Removed Per Period	MTBE Removed Cumulative
					µg/L							lbs.			
06/20/03	1,226,647	2,668,302	1.12												
07/03/03	1,243,701	2,685,356	0.91												
07/11/03	1,253,463	2,695,118	0.85												
07/18/03	1,258,696	2,700,351	0.73												
07/25/03	1,268,654	2,710,209	0.76												
07/30/03	1,273,835	2,715,490	0.73												
08/08/03	1,283,243	2,724,898	0.73												
08/14/03	1,283,519	2,725,174	0.03		1900	870	86	25	72.0	210.00	3	0.96	4.37	0.00	0.095
08/19/03	1,289,109	2,730,764	0.78												
08/28/03	1,298,236	2,739,891	0.63												
09/05/03	1,303,919	2,745,574	0.56												
09/12/03	1,310,066	2,751,721	0.61												
09/18/03	1,315,308	2,756,963	0.61												
09/26/03	1,322,013	2,763,668	0.58												
10/03/03	1,326,520	2,767,175	0.35												
10/10/03	1,331,366	2,773,041	0.58												
10/17/03	1,336,982	2,778,637	0.56												
10/21/03	1,340,478	2,782,133	0.61												
10/31/03	1,349,148	2,790,803	0.60												
11/07/03	1,355,647	2,797,502	0.66												
11/19/03	1,368,785	2,810,440	0.75												
12/05/03	1,378,360	2,820,015	0.42		370	810	6.2	2	3.9	6.10	3	0.90	5.27	0.00	0.098
12/15/03	1,378,398	2,820,053	0.00												
12/22/03	1,392,714	2,834,369	1.42												
01/07/04	1,414,074	2,855,729	0.93												
01/16/04	1,414,247	2,855,902	0.01												
01/20/04	1,425,414	2,867,069	1.94												
02/25/04	1,435,142	2,876,797	0.19												
02/27/04	1,442,161	2,883,816	2.44												
03/03/04	1,459,365	2,901,020	2.39												
03/10/04	1,479,034	2,920,689	1.95												
03/16/04	1,493,537	2,935,192	1.68												
03/26/04	1,516,089	2,957,744	1.57												
03/31/04	1,518,152	2,959,807	0.29												
04/09/04	1,539,939	2,981,594	1.68												
04/16/04	1,550,869	2,992,524	1.08												
04/23/04	1,563,204	3,004,859	1.22		25	---	0.7	<0.5	<0.5	<0.5	2	0.30	5.58	0.00	0.101
04/28/04	1,571,282	3,012,937	1.12												
05/07/04	1,584,103	3,025,758	0.99												
05/11/04		3,025,758			33	<50	0.74	<0.5	<0.5	<1	2	0.01	5.58	0.00	0.102
05/17/04	1,596,932	3,038,587	0.89												
05/21/04	1,601,214	3,042,869	0.74												
05/26/04	1,606,404	3,048,059	0.72												
06/01/04	1,616,227	3,057,882	1.14												

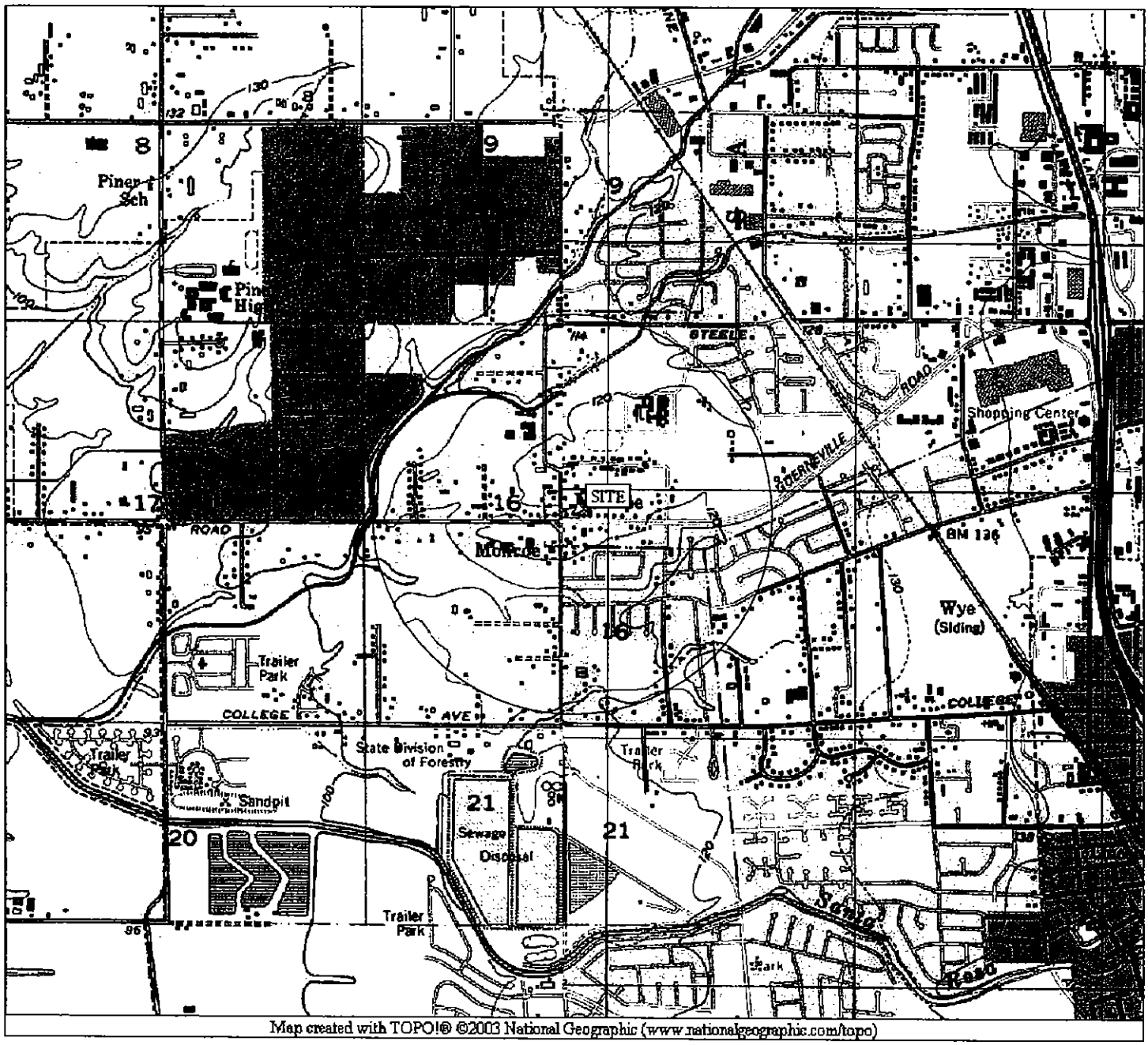
TABLE 2
OPERATIONAL AND PERFORMANCE DATA FOR GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
Redwood Oil Facility #114
1855 Guerneville Road
Santa Rosa, California
(Page 4 of 4)

Date	Effluent Totalizer [gal]	Total Flow [gal]	Average Flowrate [gpm]	Sample ID	TPHg	TPHd	B	T	E	X	MTBE	TPHg Removed Per Period	TPHg Removed Cumulative	MTBE Removed Per Period	MTBE Removed Cumulative
					<µg/L>							<lbs.>			
06/09/04	1,623,538	3,065,193	0.63												
06/11/04	1,626,596	3,068,251	1.06												
06/14/04	1,630,319	3,071,974	0.86												
06/22/04	1,636,656	3,078,313	0.55												
06/28/04	1,638,939	3,080,594	0.26												
07/02/04	1,642,243	3,083,898	0.57												
07/08/04	1,648,110	3,089,765	0.68												
07/09/04	1,649,086	3,090,741	0.68												
07/16/04	1,655,763	3,097,418	0.66												
07/22/04		3,097,418			360	190	5	4	5.3	33.00	8	0.12	5.70	0.00	0.105
07/23/04	1,661,727	3,103,382	0.59												
07/30/04	1,667,644	3,109,299	0.59												
08/04/04	1,671,901	3,113,556	0.59												
08/17/04	1,682,109	3,123,764	0.55		160,000	<50	3,100	1,000	2400.0	12,000.00	2,700	17.62	23.32	0.30	0.402
08/25/04	1,688,062	3,129,717	0.52												
09/01/04	1,692,342	3,133,997	0.42												
09/08/04	1,694,496	3,136,151	0.21												
09/13/04	1,694,496	3,136,151	0.00		550	<50	16.00	3	5.1	27.00	8	8.29	31.61	0.14	0.542
09/17/04	1,700,589	3,142,244	0.47												
12/31/04	System started to treat purge water from groundwater sampling event.														
12/31/04	1,718,683	3,160,318	0.12	W-INF	560	1400	29	9.3	24	23	1.2	0.11	31.72	0.00	0.543
				W-INT	<50	<50	<0.5	<0.5	<0.5	<0.5	<1				
				W-EFF	<50	<50	<0.5	<0.5	<0.5	<0.5	<1				
												TOTAL:	31.72		0.54

Notes:

W-INF	=	Influent water sample.
W-INT	=	Intermediate water sample.
W-EFF	=	Effluent water sample.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8260B.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8260B.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
gal	=	Gallons.
gpm	=	Gallons per minute.
µg/L	=	Micrograms per liter.
lbs.	=	Pounds.
<	=	Not detected at or above the stated laboratory reporting limit.
—		Not sampled/Not analyzed.

Data collected prior to September, 2004 compiled from the ECM Group *Systems Operations Report* dated July 9, 2004.



FN 2619TOPO

EXPLANATION

1/2-mile radius circle

APPROXIMATE SCALE

N

0 0.5 1 mile

SOURCE:
Modified from a map
provided by
DeLorme 3-D TopoQuads

ERI ENVIRONMENTAL RESOLUTIONS, INC.

SITE VICINITY MAP

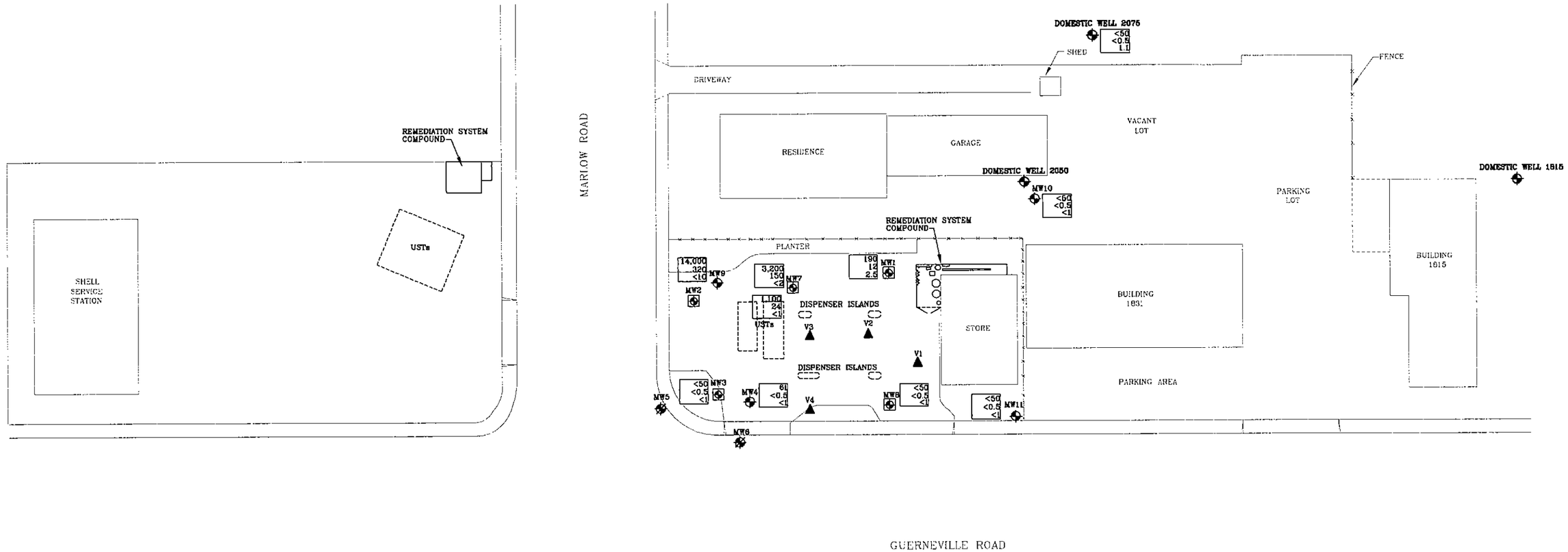
REDWOOD OIL SERVICE STATION 114
1855 Guerneville Road
Santa Rosa, California

PROJECT NO. 2619

PLATE 1

Analyte Concentrations in ug/L
Sampled December 31, 2004

14,000	Total Petroleum Hydrocarbons as gasoline
320	Benzene
<10	Methyl Tertiary Butyl Ether (Using EPA Method 8260B)
<	Less Than the Stated Laboratory Reporting Level
ug/L	Micrograms per Liter



APPROXIMATE SCALE

0 50 100 Feet

FN 26190001_QM

ERI ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

REDWOOD OIL FACILITY 114
1855 Guerneville Road
Santa Rosa, Caliornia

EXPLANATION

MW11 Groundwater Monitoring Well

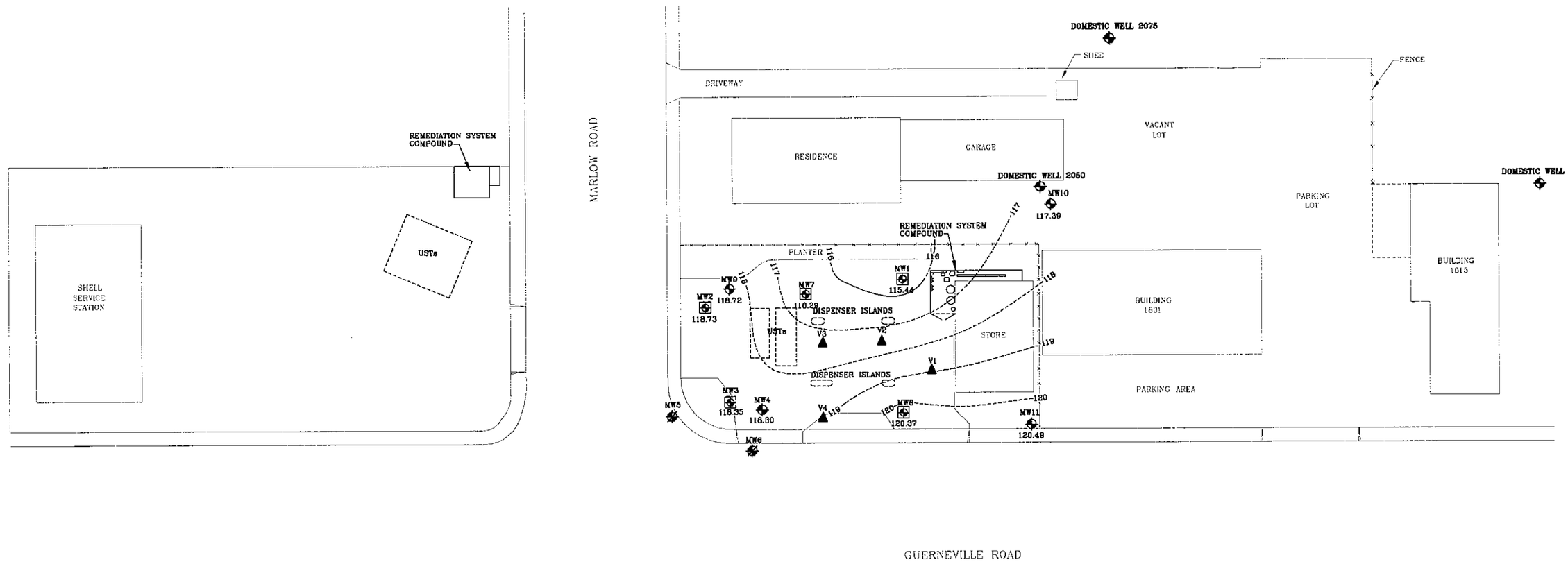
MW8 Groundwater Recovery Well

MW6 Destroyed Groundwater Monitoring Well

SVE4 Soil Vapor Extraction Well

PROJECT NO. 2619

PLATE 2



APPROXIMATE SCALE

0 50 100 Feet

FN 26190001_QM

ERI ENVIRONMENTAL RESOLUTIONS, INC.

GROUNDWATER ELEVATION MAP
December 31, 2004

REDWOOD OIL FACILITY 114
1855 Guerneville Road
Santa Rosa, Caliornia

EXPLANATION

MW11 Groundwater Monitoring Well

120.49 Groundwater elevation in feet;

MW6 Groundwater Recovery Well

MW6 Destroyed Groundwater Monitoring Well

SVE4 Soil Vapor Extraction Well

PROJECT NO. 2619

PLATE 3

ATTACHMENT A

GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

The static water level and separate-phase product level, if present, in each well that contained water and/or separate-phase product are measured with an ORS Interface Probe, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from top of casing elevations.

Groundwater samples collected for subjective evaluation are collected by gently lowering approximately half the length of a clean Teflon® or polypropylene bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples are checked for measurable free-phase hydrocarbons or sheen. If appropriate, free-phase hydrocarbons are removed from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until a minimum of three well casing volumes is purged and stabilization of the temperature, pH, and conductivity is obtained. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples." The quantity of water purged from each well is calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ where:

r	=	radius of the well casing in feet.
h	=	column of water in the well in feet (depth to bottom - depth to water)
7.48	=	conversion constant from cubic feet to gallons
π	=	ratio of the circumference of a circle to its diameter

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples." Water samples are collected with a new, disposable Teflon® or polypropylene bailer. The groundwater is carefully poured into selected sample containers (40-milliliter [ml] glass vials, 1,000-ml glass amber bottles, etc.), which are filled so as to produce a positive meniscus.

Depending on the required analysis, each sample container is preserved with hydrochloric acid, nitric acid, etc., or it is preservative free. The type of preservative used for each sample is specified on the Chain-of-Custody form.

Each vial and glass amber bottle is sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace, which would allow volatilization to occur. The samples are promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain-of-Custody record, to a California state-certified laboratory.

ATTACHMENT B

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Glenn Matteucci
Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954

Certificate ID: 41884 - 1/13/2005 9:31:17 PM

Order Number: 41884
Project Name: Guerneville Rd.
Project Number: 2619-11

Date Received: 1/4/2005 12:32:10 PM
P.O. Number: 2619-13

Certificate of Analysis - Final Report

On January 04, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	
	TPH as Gasoline	EPA 8015 MOD. (Purgeable)	
	TPH-Extractable	EPA 8015 MOD. (Extractable)	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954
Attn: Glenn Matteucci

Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-13
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 41884-001 **Sample ID:** 2075 **Matrix:** Liquid **Sample Date:** 12/31/2004 11:20 AM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/05/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	96.3	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.9	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	1.1		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethanol	ND		1	100	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100	75 - 125
Dibromofluoromethane	105	75 - 125
Toluene-d8	106	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954
Attn: Glenn Matteucci

Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-13
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 41884-002 **Sample ID:** 2050 **Matrix:** Liquid **Sample Date:** 12/31/2004 9:51 AM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Liq-Liq, Sep Funnel, McCL

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/05/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	62.4	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93.2	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	27		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethanol	ND		1	100	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	99.8	75 - 125
Dibromofluoromethane	106	75 - 125
Toluene-d8	105	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

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Attn: Glenn Matteucci

Project Number: 2619-11
Project Name: Guerneville Rd.
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P.O. Number: 2619-13
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Lab # : 41884-003 **Sample ID: MW1** **Matrix:** Liquid **Sample Date:** 12/31/2004 4:14 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/05/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	69.8	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	190		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	118	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	12		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	1.1		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	3.6		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	1.0		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	2.5		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethanol	ND		1	100	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100	75 - 125
Dibromofluoromethane	105	75 - 125
Toluene-d8	105	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
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DF = Dilution and/or Prep Factor including sample volume adjustments.

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P.O. Number: 2619-13
Sample Collected by: Client

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Lab # : 41884-004 **Sample ID:** MW2 **Matrix:** Liquid **Sample Date:** 12/31/2004 3:10 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	1000		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Note: Higher boiling gasoline compounds mixed with unresolved hydrocarbons (C8-C32).

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	73.0	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	1100		2.5	130	µg/L	N/A	N/A	01/06/2005	WGC4050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	277***	65 - 135

*** High surrogate recovery for BFB due to matrix interference.

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	24		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Toluene	1.5		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl Benzene	22		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Xylenes, Total	7.6		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethanol	ND		1	100	µg/L	N/A	N/A	01/07/2005	WMS2050106B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	108	75 - 125
Toluene-d8	106	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
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ND = Not Detected at or above the Detection Limit.

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Sample Collected by: Client

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Lab # : 41884-005 **Sample ID:** MW3 **Matrix:** Liquid **Sample Date:** 12/31/2004 3:48 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/05/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	36.6	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.0	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethanol	ND		1	100	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	107	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

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ND = Not Detected at or above the Detection Limit.

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Lab # : 41884-006 **Sample ID: MW4** **Matrix:** Liquid **Sample Date:** 12/31/2004 2:54 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	42.5	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	61		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.6	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	0.77		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethanol	ND		1	100	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100	75 - 125
Dibromofluoromethane	107	75 - 125
Toluene-d8	106	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

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Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-13
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 41884-007 **Sample ID:** MW7 **Matrix:** Liquid **Sample Date:** 12/31/2004 7:30 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Liq-Liq, Sep Funnel, MeCl

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Note: 540 ppb higher boiling gasoline compounds in the diesel range(C8-C16). No Diesel pattern present.

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	85.8	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	3200		20	1000	µg/L	N/A	N/A	01/06/2005	WGC4050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	128	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	150		2	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Toluene	66		2	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl Benzene	120		2	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Xylenes, Total	210		2	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Methyl-t-butyl Ether	ND		2	2	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl-t-butyl Ether	ND		2	10	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Butanol (TBA)	ND		2	20	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Diisopropyl Ether	ND		2	10	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Amyl Methyl Ether	ND		2	10	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dichloroethane	ND		2	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dibromoethane (EDB)	ND		2	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethanol	ND		2	200	µg/L	N/A	N/A	01/07/2005	WMS2050106B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	105	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

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Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-13
Sample Collected by: Client

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Lab # : 41884-008 **Sample ID:** MW8 **Matrix:** Liquid **Sample Date:** 12/31/2004 2:26 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	71.8	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	94.6	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethanol	ND		1	100	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	106	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting. ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

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Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-13
Sample Collected by: Client

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Lab # : 41884-009 **Sample ID:** MW9 **Matrix:** Liquid **Sample Date:** 12/31/2004 1:30 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Note: 510 ppb higher boiling gasoline compounds in the diesel range(C8-C16). No Diesel pattern present.

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	55.5	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	14000		20	1000	µg/L	N/A	N/A	01/10/2005	WGC4050110

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	144***	65 - 135

*** High surrogate recovery for BFB due to matrix interference.

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	320		10	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Toluene	560		10	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl Benzene	420		10	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Xylenes, Total	1500		10	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Methyl-t-butyl Ether	ND		10	10	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl-t-butyl Ether	ND		10	50	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Butanol (TBA)	ND		10	100	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Diisopropyl Ether	ND		10	50	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Amyl Methyl Ether	ND		10	50	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dichloroethane	ND		10	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dibromoethane (EDB)	ND		10	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethanol	ND		10	1000	µg/L	N/A	N/A	01/07/2005	WMS2050106B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	106	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.

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Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954
Attn: Glenn Matteucci

Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-13
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 41884-010 **Sample ID:** MW10 **Matrix:** Liquid **Sample Date:** 12/31/2004 2:11 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Liq-Liq, Sep Funnel, MeCl

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Note: 400 ppb atypical Oil mixed with discrete peaks in the sample. No Diesel pattern.

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	67.5	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.9	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/07/2005	WMS2050106B
Ethanol	ND		1	100	µg/L	N/A	N/A	01/07/2005	WMS2050106B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	108	75 - 125
Toluene-d8	105	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

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601 North McDowell Blvd.
Petaluma, CA 94954
Attn: Glenn Matteucci

Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-13
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 41884-011 **Sample ID:** MW11 **Matrix:** Liquid **Sample Date:** 12/31/2004 3:10 PM

Method: EPA 8015 MOD. (Extractable)
Prep Method: EPA 3510C - Liq-Liq, Sep Funnel, MeCL

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	41.9	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93.8	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethanol	ND		1	100	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	103	75 - 125
Dibromofluoromethane	107	75 - 125
Toluene-d8	106	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
ND = Not Detected at or above the Detection Limit.
DF = Dilution and/or Prep Factor including sample volume adjustments.

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Quality Control - Method Blank

Liquid

Validated by: MTU - 01/10/05

QC Batch ID: WGC4050106

Analysis Date: 1/6/2005

Method Blank **Method: EPA 8015 MOD. (Purgeable)**

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	96.0	65 - 135

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 01/10/05

QC Batch ID: WGC4050106

Analysis Date: 1/6/2005

LCS **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	254	LCS	1/6/2005	102			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	109	65 - 135

LCSD **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	248	LCSD	1/6/2005	99.1	2.4	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	106	65 - 135

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Quality Control - Method Blank

Liquid

Validated by: MTU - 01/12/05

QC Batch ID: WGC4050107
Analysis Date: 1/10/2005

Method Blank **Method: EPA 8015 MOD. (Purgeable)**

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	94.1	65 - 135

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WGC4050107
Analysis Date: 1/10/2005

LCS **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	231	LCS	1/10/2005	92.2			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105	65 - 135

LCSD **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	234	LCSD	1/10/2005	93.6	0.9	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105	65 - 135

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Quality Control - Matrix Spike / Duplicate Results
Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WGC4050107
Analysis Date: 1/10/2005

Method EPA 8015 MOD. (Purgeable) Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 41884-005									
TPH as Gasoline	ND	250	240	MS	1/10/2005	96.2			65 - 135
Surrogate / % Recovery / Control Limits									
4-Bromofluorobenzene	107	65 - 135							
MSD SampleNumber: 41884-005									
TPH as Gasoline	ND	250	248	MSD	1/10/2005	99.4	3.3	25	65 - 135
Surrogate / % Recovery / Control Limits									
4-Bromofluorobenzene	106	65 - 135							

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Quality Control - Method Blank

Liquid

Validated by: MTU - 01/12/05

QC Batch ID: WGC4050110

Analysis Date: 1/10/2005

Method Blank **Method: EPA 8015 MOD. (Purgeable)**

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	94.0	65 - 135

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WGC4050110

Analysis Date: 1/10/2005

LCS **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	239	LCS	1/10/2005	95.7			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102	65 - 135

LCSD **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	239	LCSD	1/10/2005	95.6	0.2	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102	65 - 135

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Quality Control - Matrix Spike / Duplicate Results
Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WGC4050110
Analysis Date: 1/10/2005

Method EPA 8015 MOD. (Purgeable)

Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 41926-005									
TPH as Gasoline	ND	250	237	MS	1/10/2005	94.9			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	103	65 - 135

MSD SampleNumber: 41926-005									
TPH as Gasoline	ND	250	236	MSD	1/10/2005	94.6	0.3	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105	65 - 135

Method EPA 8020

Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 41926-005									
Benzene	ND	2.8	2.94	MS	1/10/2005	105			65 - 135
Ethyl Benzene	ND	3.7	3.27	MS	1/10/2005	89.1			65 - 135
Toluene	ND	16	16.4	MS	1/10/2005	100			65 - 135
Xylenes, total	ND	20	17.9	MS	1/10/2005	91.4			65 - 135
MSD SampleNumber: 41926-005									
Benzene	ND	2.8	3.28	MSD	1/10/2005	117	10.9	25	65 - 135
Ethyl Benzene	ND	3.7	3.30	MSD	1/10/2005	89.9	0.9	25	65 - 135
Toluene	ND	16	16.6	MSD	1/10/2005	101	0.8	25	65 - 135
Xylenes, total	ND	20	18.3	MSD	1/10/2005	93.7	2.4	25	65 - 135

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Quality Control - Method Blank

Liquid

Validated by: MTU - 01/12/05

QC Batch ID: WMS2050106

Analysis Date: 1/6/2005

Method Blank **Method: EPA 8260B**

Parameter	Result	DF	PQLR	Units
1,2-Dibromoethane (EDB)	ND	1	0.5	µg/L
1,2-Dichloroethane	ND	1	0.5	µg/L
Benzene	ND	1	0.5	µg/L
Diisopropyl Ether	ND	1	5	µg/L
Ethanol	ND	1	100	µg/L
Ethyl Benzene	ND	1	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	µg/L
Methyl-t-butyl Ether	ND	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
Toluene	ND	1	0.5	µg/L
Xylenes, Total	ND	1	0.5	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	103	75 - 125
Toluene-d8	107	75 - 125

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WMS2050106

Analysis Date: 1/6/2005

LCS **Method: EPA 8260B** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20.0	19.8	LCS	1/6/2005	99.1			80 - 120
Methyl-t-butyl Ether	<0.3	20.0	21.2	LCS	1/6/2005	106			80 - 120
Toluene	<0.2	20.0	20.1	LCS	1/6/2005	101			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	103	75 - 125
Dibromofluoromethane	108	75 - 125
Toluene-d8	102	75 - 125

LCSD **Method: EPA 8260B** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20.0	19.4	LCSD	1/6/2005	97.0	2.2	25	80 - 120
Methyl-t-butyl Ether	<0.3	20.0	19.9	LCSD	1/6/2005	99.5	6.4	25	80 - 120
Toluene	<0.2	20.0	20.4	LCSD	1/6/2005	102	1.5	25	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	106	75 - 125
Toluene-d8	105	75 - 125

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Quality Control - Matrix Spike / Duplicate Results
Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WMS2050106

Analysis Date: 1/6/2005

Method EPA 8260B Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 41883-001									
1,1-Dichloroethene	ND	20	18.9	MS	1/6/2005	94.5			65 - 135
Benzene	ND	20	19.2	MS	1/6/2005	95.8			65 - 135
Chlorobenzene	ND	20	19.6	MS	1/6/2005	97.8			65 - 135
Methyl-t-butyl Ether	ND	20	20.3	MS	1/6/2005	102			65 - 135
Toluene	ND	20	19.6	MS	1/6/2005	98.1			65 - 135
Trichloroethene	ND	20	19.3	MS	1/6/2005	96.7			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102	75 - 125
Dibromofluoromethane	112	75 - 125
Toluene-d8	104	75 - 125

MSD SampleNumber: 41883-001									
1,1-Dichloroethene	ND	20	19.0	MSD	1/6/2005	95.0	0.5	25	65 - 135
Benzene	ND	20	19.5	MSD	1/6/2005	97.4	1.6	25	65 - 135
Chlorobenzene	ND	20	19.7	MSD	1/6/2005	98.3	0.5	25	65 - 135
Methyl-t-butyl Ether	ND	20	21.0	MSD	1/6/2005	105	3.4	25	65 - 135
Toluene	ND	20	19.8	MSD	1/6/2005	99.1	1.0	25	65 - 135
Trichloroethene	ND	20	19.7	MSD	1/6/2005	98.5	1.9	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102	75 - 125
Dibromofluoromethane	111	75 - 125
Toluene-d8	103	75 - 125

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Quality Control - Method Blank
Liquid

QC Batch ID: WMS2050106B
Analysis Date: 1/7/2005

Method Blank **Method: EPA 8260B**

Parameter	Result	DF	PQLR	Units
1,2-Dibromoethane (EDB)	ND	1	0.5	µg/L
1,2-Dichloroethane	ND	1	0.5	µg/L
Benzene	ND	1	0.5	µg/L
Diisopropyl Ether	ND	1	5	µg/L
Ethanol	ND	1	100	µg/L
Ethyl Benzene	ND	1	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	µg/L
Methyl-t-butyl Ether	ND	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
Toluene	ND	1	0.5	µg/L
Xylenes, Total	ND	1	0.5	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	102	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	105	75 - 125

Quality Control - Laboratory Control Spike / Duplicate Results
Liquid

QC Batch ID: WMS2050106B
Analysis Date: 1/7/2005

LCS **Method: EPA 8260B** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20.0	19.0	LCS	1/7/2005	95.1			80 - 120
Methyl-t-butyl Ether	<0.3	20.0	19.7	LCS	1/7/2005	98.7			80 - 120
Toluene	<0.2	20.0	19.5	LCS	1/7/2005	97.7			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	104	75 - 125

LCSD **Method: EPA 8260B** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20.0	19.8	LCSD	1/7/2005	99.1	4.2	25	80 - 120
Methyl-t-butyl Ether	<0.3	20.0	21.2	LCSD	1/7/2005	106	7.1	25	80 - 120
Toluene	<0.2	20.0	20.4	LCSD	1/7/2005	102	4.4	25	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	108	75 - 125
Toluene-d8	104	75 - 125

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Quality Control - Method Blank

Liquid

Prep Batch ID: DW4841A Validated by: LGLANTZ - 01/06/05 **QC Batch ID: DW4841A**

Prep Date: 1/4/2005 **Analysis Date: 1/5/2005**

Method Blank **Method: EPA 8015 MOD. (Extractable)**

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	84.6	22 - 133

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Prep Batch ID: DW4841A Reviewed by: LGLANTZ - 01/06/05 **QC Batch ID: DW4841A**

Prep Date: 1/4/2005 **Analysis Date: 1/5/2005**

LCS **Method: EPA 8015 MOD. (Extractable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<24	1000	1080	LCS	1/5/2005	108			35 - 109

Surrogate	% Recovery	Control Limits
o-Terphenyl	110	22 - 133

LCSD **Method: EPA 8015 MOD. (Extractable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<24	1000	958	LCSD	1/5/2005	95.8	11.8	25	35 - 109

Surrogate	% Recovery	Control Limits
o-Terphenyl	95.3	22 - 133

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: Glenn Matteucci	Phone No.: (707) 766-2030	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: Environmental Resolutions	Fax No.: (707) 789-0414	Project No.: 261913	Company:	Quote No.:
Mailing Address: 601 N. McDowell Blvd	Email Address: Gmatteucci@eri-us.com	Project Name: Redwood Oil	Billing Address: (If Different)	
City: Petaluma	State: CA Zip Code: 94954	Project Location: 1855 Guerneville Rd	City: Santa Rosa	State: CA Zip:

Sampler: D. Daniels
Field Org. Code:
Global ID:

Turn Around Time: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day ☐ 5 Day ☑ 10 Day

Order ID:

Sample

Client ID / Field Point	Lab. No.	Date	Time	Matrix	No. of Containers	EPA 8260B	BTEX ☑, MTBE ☑	5 Oxygenates (MTBE, TBA, ETBA, DIPE, TAME) ☑ Lead Scavengers (1,2-DCA & EDB) ☑ Ethanol ☑	Base/Neutral/Acid Organics 8270C ☐, PAH - 8270C ☐, PAH - 8270C SIM ☐	TPH d 8015	TPH Extractable: Diesel ☐, Motor Oil ☐, Other ☐, w/ Si-Gel Cleanup ☐	Pesticides-8081 ☐	PCBs - 8082 ☐	TPH as Gas ☑ BTEX ☐, MTBE ☐, by 8015M/8020	Methanol by 8015M	HOLD	Anions: F ☐ Cl ☐ Br ☐ SO4 ☐ NO3 ☐ NO2 ☐ PO4 ☐	pH ☐ TSS ☐ SC ☐ TOC ☐ TRPH ☐ O & G ☐	Metals - Circle Below Total ☐ Dissolved ☐ STLC ☐ TCLP ☐	Remarks
2075	41884-001	12/31/04	~~09:54~~ 11:20		6/2		X	X		X			X								Tolly by
2050	002		9:51		6/2		X	X		X			X								8015M Per
MW1	003		16:14		6/2		X	X		X			X								Vickie Burns
MW2	004		15:10		6/2		X	X		X			X								@eri 1-4-05
MW3	005		15:48		6/2		X	X		X			X								SNH
MW4	006		14:54		6/2		X	X		X			X								
MW7	007		13:30		6/2		X	X		X			X								Also would
MW8	008		14:26		6/2		X	X		X			X								like EDF
MW9	009		13:30		6/2		X	X		X			X								deliverable
MW10	010		14:11		6/2		X	X		X			X								GID
MW11	011		15:10		6/2		X	X		X			X								T0609700601
BB	012		11:00		3/1		[illegible]									X					

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	1-4-04	0950
[signature]	[signature]	1/4/05	1155

Special Instructions or Comments

e-mail EDF to:
dlacy@eri-us.com

Metals: Al, As, Sb, Ba, Be, Bi, B, Cd, Ce, Ca, Cr, Co, Cs, Cu, Fe, Pb, Mg, Mn, Ga, Ge, Hg, In, Li, Mo, Ni, P, K, Si, Ag, Na, S, Se, Sr, Ta, Te, Tl, Sn, Ti, Zn, V, W, Zr

☐ EDD Report
☒ EDF Report
☐ Plating
☐ LUFT-5
☐ RCRA-8
☐ PPM-13
☐ CAM-17

June 2004

Entech Analytical Labs, Inc.

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Matt Herman
Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954

Certificate ID: 41883 - 1/12/2005 2:21:20 PM

Order Number: 41883
Project Name: Guerneville Rd.
Project Number: 2619-11

Date Received: 1/4/2005 12:18:43 PM
P.O. Number: 2619-11

Certificate of Analysis - Final Report

On January 04, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Method	Comments
Liquid	8260Petroleum	EPA 8260B	
	TPH as Gasoline	EPA 8015 MOD. (Purgeable)	
	TPH-Extractable	EPA 8015 MOD. (Extractable)	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954
Attn: Matt Herman

Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-11
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 41883-001 **Sample ID: W-EFF** **Matrix:** Liquid **Sample Date:** 12/31/2004 2:00 PM

Method: EPA 8015 MOD. (Extractable) **Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/05/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	90.7	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable) **Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/07/2005	WGC4050107

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.3	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS) **Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	107	75 - 125
Toluene-d8	106	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.

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Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954
Attn: Matt Herman

Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-11
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 41883-002 **Sample ID: W-INT** **Matrix:** Liquid **Sample Date:** 12/31/2004 2:10 PM

Method: EPA 8015 MOD. (Extractable) **Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND		1	50	µg/L	01/04/2005	DW4841A	01/05/2005	DW4841A

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	79.7	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable) **Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	01/06/2005	WGC4050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.5	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS) **Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	100	75 - 125
Dibromofluoromethane	107	75 - 125
Toluene-d8	107	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.

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Environmental Resolutions
601 North McDowell Blvd.
Petaluma, CA 94954
Attn: Matt Herman

Project Number: 2619-11
Project Name: Guerneville Rd.
Date Received: 1/4/2005
P.O. Number: 2619-11
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 41883-003 **Sample ID:** W-INF **Matrix:** Liquid **Sample Date:** 12/31/2004 2:20 PM

Method: EPA 8015 MOD. (Extractable) **Prep Method: EPA 3510C - Sep. funnel liquid/liquid extraction**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	1400		1	50	µg/L	01/04/2005	DW4841A	01/06/2005	DW4841A

Note: 1400 ppb unidentified hydrocarbon compounds(C8-C36).

Surrogate	Surrogate Recovery	Control Limits (%)
o-Terphenyl	83.9	22 - 133

Analyzed by: Jhsiang
Reviewed by: LGLANTZ

Method: EPA 8015 MOD. (Purgeable) **Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	560		2.5	130	µg/L	N/A	N/A	01/06/2005	WGC4050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	188***	65 - 135

*** High surrogate revery for BFB due to matrix interference.

Analyzed by: mruan
Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS) **Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples**

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	29		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Toluene	9.3		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl Benzene	24		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Xylenes, Total	23		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
Methyl-t-butyl Ether	1.2		1	1	µg/L	N/A	N/A	01/06/2005	WMS2050106
Ethyl-t-butyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	01/06/2005	WMS2050106
Diisopropyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
tert-Amyl Methyl Ether	ND		1	5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dichloroethane	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106
1,2-Dibromoethane (EDB)	ND		1	0.5	µg/L	N/A	N/A	01/06/2005	WMS2050106

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	106	75 - 125
Toluene-d8	105	75 - 125

Analyzed by: TFulton
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.

Entech Analytical Labs, Inc.

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Quality Control - Method Blank

Liquid

Prep Batch ID: DW4841A Validated by: LGLANTZ - 01/06/05 **QC Batch ID: DW4841A**

Prep Date: 1/4/2005 **Analysis Date: 1/5/2005**

Method Blank **Method: EPA 8015 MOD. (Extractable)**

Parameter	Result	DF	PQLR	Units
TPH as Diesel	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
o-Terphenyl	84.6	22 - 133

Entech Analytical Labs, Inc.

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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Prep Batch ID: DW4841A Reviewed by: LGLANTZ - 01/06/05 **QC Batch ID: DW4841A**

Prep Date: 1/4/2005 **Analysis Date: 1/5/2005**

LCS **Method: EPA 8015 MOD. (Extractable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<24	1000	1080	LCS	1/5/2005	108			35 - 109

Surrogate	% Recovery	Control Limits
o-Terphenyl	110	22 - 133

LCSD **Method: EPA 8015 MOD. (Extractable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Diesel	<24	1000	958	LCSD	1/5/2005	95.8	11.8	25	35 - 109

Surrogate	% Recovery	Control Limits
o-Terphenyl	95.3	22 - 133

Entech Analytical Labs, Inc.

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Quality Control - Method Blank

Liquid

Validated by: MTU - 01/10/05

QC Batch ID: WGC4050106

Analysis Date: 1/6/2005

Method Blank **Method: EPA 8015 MOD. (Purgeable)**

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	96.0	65 - 135

Entech Analytical Labs, Inc.

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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 01/10/05

QC Batch ID: WGC4050106

Analysis Date: 1/6/2005

LCS **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	254	LCS	1/6/2005	102			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	109	65 - 135

LCSD **Method: EPA 8015 MOD. (Purgeable)** **Conc. Units: µg/L**

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	248	LCSD	1/6/2005	99.1	2.4	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	106	65 - 135

Entech Analytical Labs, Inc.

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Quality Control - Method Blank

Liquid

Validated by: MTU - 01/12/05

QC Batch ID: WGC4050107
Analysis Date: 1/10/2005

Method Blank **Method: EPA 8015 MOD. (Purgeable)**

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	94.1	65 - 135

Entech Analytical Labs, Inc.

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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WGC4050107

Analysis Date: 1/10/2005

LCS Method: EPA 8015 MOD. (Purgeable) Conc. Units: µg/L

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	231	LCS	1/10/2005	92.2			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105	65 - 135

LCSD Method: EPA 8015 MOD. (Purgeable) Conc. Units: µg/L

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<5	250	234	LCSD	1/10/2005	93.6	0.9	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105	65 - 135

Entech Analytical Labs, Inc.

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Quality Control - Matrix Spike / Duplicate Results
Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WGC4050107
Analysis Date: 1/10/2005

Method EPA 8015 MOD. (Purgeable)

Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 41884-005									
TPH as Gasoline	ND	250	240	MS	1/10/2005	96.2			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	107	65 - 135

MSD SampleNumber: 41884-005									
TPH as Gasoline	ND	250	248	MSD	1/10/2005	99.4	3.3	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	106	65 - 135

Entech Analytical Labs, Inc.

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Quality Control - Method Blank

Liquid

Validated by: MTU - 01/12/05

QC Batch ID: WMS2050106

Analysis Date: 1/6/2005

Method Blank **Method: EPA 8260B**

Parameter	Result	DF	PQLR	Units
1,2-Dibromoethane (EDB)	ND	1	0.5	µg/L
1,2-Dichloroethane	ND	1	0.5	µg/L
Benzene	ND	1	0.5	µg/L
Diisopropyl Ether	ND	1	5	µg/L
Ethyl Benzene	ND	1	0.5	µg/L
Ethyl-t-butyl Ether	ND	1	5	µg/L
Methyl-t-butyl Ether	ND	1	1	µg/L
tert-Amyl Methyl Ether	ND	1	5	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
Toluene	ND	1	0.5	µg/L
Xylenes, Total	ND	1	0.5	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	103	75 - 125
Toluene-d8	107	75 - 125

Entech Analytical Labs, Inc.

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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WMS2050106

Analysis Date: 1/6/2005

LCS **Method: EPA 8260B** Conc. Units: µg/L

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.2	20.0	18.1	LCS	1/6/2005	90.7			80 - 120
Benzene	<0.2	20.0	19.8	LCS	1/6/2005	99.1			80 - 120
Chlorobenzene	<0.2	20.0	20.6	LCS	1/6/2005	103			80 - 120
Methyl-t-butyl Ether	<0.3	20.0	21.2	LCS	1/6/2005	106			80 - 120
Toluene	<0.2	20.0	20.1	LCS	1/6/2005	101			80 - 120
Trichloroethene	<0.2	20.0	20.2	LCS	1/6/2005	101			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	103	75 - 125
Dibromofluoromethane	108	75 - 125
Toluene-d8	102	75 - 125

LCSD **Method: EPA 8260B** Conc. Units: µg/L

Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.2	20.0	18.3	LCSD	1/6/2005	91.3	0.7	25	80 - 120
Benzene	<0.2	20.0	19.4	LCSD	1/6/2005	97.0	2.2	25	80 - 120
Chlorobenzene	<0.2	20.0	20.4	LCSD	1/6/2005	102	0.6	25	80 - 120
Methyl-t-butyl Ether	<0.3	20.0	19.9	LCSD	1/6/2005	99.5	6.4	25	80 - 120
Toluene	<0.2	20.0	20.4	LCSD	1/6/2005	102	1.5	25	80 - 120
Trichloroethene	<0.2	20.0	20.0	LCSD	1/6/2005	100	1.1	25	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	104	75 - 125
Dibromofluoromethane	106	75 - 125
Toluene-d8	105	75 - 125

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Quality Control - Matrix Spike / Duplicate Results
Liquid

Reviewed by: MTU - 01/12/05

QC Batch ID: WMS2050106

Analysis Date: 1/6/2005

Method EPA 8260B

Conc. Units: µg/L

Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 41883-001									
1,1-Dichloroethene	ND	20	18.9	MS	1/6/2005	94.5			65 - 135
Benzene	ND	20	19.2	MS	1/6/2005	95.8			65 - 135
Chlorobenzene	ND	20	19.6	MS	1/6/2005	97.8			65 - 135
Methyl-t-butyl Ether	ND	20	20.3	MS	1/6/2005	102			65 - 135
Toluene	ND	20	19.6	MS	1/6/2005	98.1			65 - 135
Trichloroethene	ND	20	19.3	MS	1/6/2005	96.7			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102	75 - 125
Dibromofluoromethane	112	75 - 125
Toluene-d8	104	75 - 125

MSD SampleNumber: 41883-001									
1,1-Dichloroethene	ND	20	19.0	MSD	1/6/2005	95.0	0.5	25	65 - 135
Benzene	ND	20	19.5	MSD	1/6/2005	97.4	1.6	25	65 - 135
Chlorobenzene	ND	20	19.7	MSD	1/6/2005	98.3	0.5	25	65 - 135
Methyl-t-butyl Ether	ND	20	21.0	MSD	1/6/2005	105	3.4	25	65 - 135
Toluene	ND	20	19.8	MSD	1/6/2005	99.1	1.0	25	65 - 135
Trichloroethene	ND	20	19.7	MSD	1/6/2005	98.5	1.9	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	102	75 - 125
Dibromofluoromethane	111	75 - 125
Toluene-d8	103	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court (408) 588-0200
Santa Clara, CA 95054 (408) 588-0201 - Fax

Chain of Custody / Analysis Request

Attention to: Matt Herman	Phone No.: 707 766-2027	Purchase Order No.:	Invoice to: (If Different)	Phone:
Company Name: Environmental Resolutions	Fax No.: 707 789-0414	Project No.: 2619-11	Company: Redwood Oil Co.	Quote No.:
Mailing Address: 601 North McDowell Blvd	Email Address: mherman@eri-us.com	Project Name: Guerneville Rd	Billing Address: (If Different)	
City: Petaluma / State: CA / Zip Code: 94954		Project Location: 1855 Guerneville Rd.	City: Santa Rosa / State: CA / Zip:	

Sampler: D. Daniels
Field Org. Code:
Global ID:

Turn Around Time: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day ☐ 5 Day ☒ 10 Day

Order ID:

Client ID / Field Point	Lab. No.	Sample Date	Sample Time	Matrix	No. of Containers	EPA 8260B	BTEX ☒ MTBE ☐ TPH Gas ☒ EPA 8260B	5 Oxygenates (MTBE, TBA, ETBA, DIPE, TAME) ☒ Lead Scavengers (1,2-DCA & EDB) ☐ Ethanol ☐	Base/Neutral/Acid Organics 8270C ☐ PAH - 8270C-SIM ☐	TPH Extractable: Diesel ☒ Motor Oil ☐ Other ☐ w/ Si-Gel Cleanup ☐	Pesticides-8081 ☐ PCBs - 8082 ☐	TPH as Gas ☒ BTEX ☐ MTBE ☐ by 8015M/8020	Methanol by 8015M	Anions: F ☐ Cl ☐ Br ☐ SO4 ☐ NO3 ☐ NO2 ☐ PO4 ☐	pH ☐ TSS ☐ SC ☐ TOC ☐ TRPH ☐ O & G ☐	Metals - Circle Below Total ☐ Dissolved ☐ STLC ☐ TCLP ☐	Remarks
W-EFF		12/31/04	1400	H_2O	5 VOA 2 Amber		X	X		X		X					41883-001
W-INT		12/31/04	1410	H_2O	5 VOA 2 Amber		X	X		X		X					002
W-INF		12/31/04	1420	H_2O	5 VOA 2 Amber		X	X		X		X					003

TPH-G by 8015M
analyze w/ Scavenger added
Add EDB + Etch to G-IID
T0609700601
per Vickie
Burns 1-9-05

Relinquished by:	Received by:	Date:	Time:
[signature]	[signature]	1-4-04	0950
[signature]	[signature]	1/4/05	1155

Special Instructions or Comments
e-mail EDF to: jlacy@eri-us.com

Metals: Al, As, Sb, Ba, Be, Bi, B, Cd, Ce, Ca, Cr, Co, Cs, Cu, Fe, Pb, Mg, Mn, Ga, Ge, Hg, In, Li, Mo, Ni, P, K, Si, Ag, Na, S, Se, Sr, Ta, Te, Tl, Sn, Ti, Zn, V, W, Zr

☐ EDD Report
☒ EDF Report
☐ Plating
☐ LUFT-5
☐ RCRA-8
☐ PPM-13
☐ CAM-17

June 2004

ATTACHMENT C

FIELD NOTES

Environmental Resolutions, Inc.

WORK REQUEST

ERI Job Number: 02261913

Client: Redwood Oil

Project Manager: GLM

Field Supervisor: Vicki Burns

Site ID: 114

1855 Guerneville Road

Santa Rosa, CA

USA# _____ _____ thru _____

Personnel: TBD

Engineer: John Mahoney

Dates: _____ through _____

Activity	Time Budgeted	Time Used
Load/Unload:		Hrs
Travel:		Hrs
Office:		Hrs

Stay-over: Yes / No

WORK SCOPE:

Groundwater Monitoring and Sampling * New Site

Perform semi-annual groundwater monitoring and sampling of wells listed below. Purge/Decon water generated during the sampling event may be processed through the remediation system. **See Matt H. regarding; system operation; CoCs; and oxys/lead scavengers.** Following purging, collect ~~four~~ 6 40-ml voas (HCL) and 2 1-liter ambers from each well. Samples will be analyzed for TPHd (8015) & TPHg/BTEX/MTBE (8260B). Samples will be submitted to:

Entech
~~Entech~~ Analytical Labs, Inc.
~~1~~34 Victor Court
Santa Clara, CA 95054
(408) 588-0200
(408) 588-0201 Fax

+ Oxy's by 8260
+ Pb scavengers Collect 6 voas and 2 liters
+ Ethanol

Contact the lab to arrange a courier (they are closed on 12/31).

WELL #	Monitor	Sample	TD (ft)	Casing Dia. (in)
BB				
2075		X	?	?
2050		X	?	?
MW10	X	X	30	2
MW8	X	X	30	4
MW4	X	X	15	4
MW11	X	X	20	2
MW9	X	X	25	4
MW3	X	X	40	4
MW1	X	X	30.5	4
MW2	X	X	24	4
MW7	X	X	30	4
V1	X		12	4
V2	X		12	4
V3	X		15	4
V4	X		?	4

Environmental Resolutions, Inc.
WORK REQUEST

ERI Job Number:	2619 11	Personnel:	QM tech
Client:	Redwood Oil		
Project Manager:	GLM	Start Date:	12/31/2004 Due Date:
Site ID:	1455 Gerneville Rd	USA #	through
Location:	1455 Gerneville Rd. Santa Rosa, CA	P.O.#	

Work Requested:

Sample remediation system while processing QM water through system.
Samples to be taken at three locations:
W-EFF - Water can be sampled from small brass drain valve on the bottom of the carbon vessel farthest from the compound entrance.
W-INT - Sample port located on top of blue carbon vessel farthest from entrance of compound.
W-INF - Sample port located on top of blue carbon vessel nearest entrance of compound.
See attached COC, call Matt with any questions: 707.766.2027 office, 415.720.1161 cell.

- Bring poly transfer vessel

HOURS BUDGETED:	BUDGETED FOR:	HOURS BUDGETED:	BUDGETED FOR:
FIELD ACTIVITIES		FIELD/OFFICE ACTIVITIES	
			PRINCIPAL
			PROJECT MANAGER
			SENIOR STAFF
			STAFF
			DRAFTING
			ADMIN. SUPPORT

TIME CARD LINE ITEM ENTRY

Project: 02261911
Task: 1199000
Billable? Y
Field: Y
Labor Class:
Doc.Ext/ Repair#:
Description: Sample System
Account: 5000

TIME CARD LINE ITEM ENTRY

Project:
Task:
Billable?
Field:
Labor Class:
Doc.Ext/ Repair#:
Description:
Account:

DAILY FIELD REPORT

ENVIRONMENTAL RESOLUTIONS, INC.

PROJECT: 2619 JOB # + ACTIVITY:
SUBJECT: QM 4th 04 DATE: 12/31/04
EQUIPMENT USED: SHEET: OF
NAME: D. Daniels + Ron PROJECT MNGR: G. M.

On site 8:30 foggy, cool, showers
Ronny here already, he checked in
Safety
Open Well → DTW
GRS not operating, water in containment + holding tank full called Matt, he talked me through some stuff, but is coming to check it out.
Matt on site trouble shooting GRS

Most of the well box lids are the manhole cover type, many of which are fiberglass.

Sample domestic
2015 not home, sampled from only hose bib I could find in the vicinity of the mapped location
2050 can be accessed from behind the station near MW10, you don't need to go through the residence

Purge + sample most of the wells have hoses and/or pumps in them, several pumps had to be pulled.

Transfer water to GRS 296 gallons
266 purge 30 decon

Check-out
Offsite 1630

FIELDRP.DWG REV. 9/10/96

73 Digital Drive, Suite 100, Novato, California 94949 415 - 382 - 9105 (Fax 415 - 382 - 1856)

White - Project Manager Yellow - O&M Binder Pink - Onsite O&M Binder

WATER SAMPLING SITE STATUS

12/31/04

Date: _____

EWR# _____

Inspector _____

ERI Job Number 2619 Station No. _____ Site Address 1855 Guerneville Rd. Santa Rosa CA

Well No.		Well Head Screws (N R ok)	Rubber Gasket (N R ok)	Well Cap Locking (N R ok)	Lock on Well Cap (N R ok)	Concrete Well Seal (N R ok)	Well Head PVC (N R ok)	Water in Well Vault (Y N)	TABS	Well cover size	Fence/Gate Condition	# Drums	Drum Contents (S W E)	Building Condition (G V O)	Site Appearance	Comments / well cover #
MW	2	N	N	N*	NA	OK	OK	N	N*							* Man hole type * hoses
MW	7	N	N	N*	NA	OK	OK	N	N*							* Big plastic manhole type * hoses
V3		N	Y	N*	NA	OK	OK	N	N*							* PVC w/ gauge * big plastic manhole
V2		N	N	N*	NA	OK	OK	N	N*							Big plastic manhole cover * PVC w/ gauge
V4		Y	N	RY	RY	OK	OK	N	OK							* Big plastic manhole cover * built for hook up
V1		N	N	N*	NA	OK	OK	N	N*							

N = Not Repairable in time available - see comments
R = Repaired - see comments
ok No action needed
Y = Yes
N = No

S = Soil
W = Water
E = Empty

G = Grafitti on Walls
V = Vagrants (or evidence of)
O = Open (not secure)

Rev: 1
FN:WAT

WATER SAMPLING SITE STATUS

Date: 12/5/04

EWH#

Inspector: R. Johnson

ERI Job Number 261913X Station No. _____ Site Address 1455 Gernville Rd

Well No.		Well Head Screws	Rubber Gasket	Well Cap Locking	Lock on Well Cap	Concrete Well Seal	Well Head PVC	Water in Well Vault	TABS	Well Cover Size	Fence/Gate Condition	# Drums	Drum Contents	Building Condition	Site Appearance	Comments / well cover #
		N R ok	N R ok	N R ok	N R ok	N R ok	N R ok	Y N					E W E	G V O		
MW10		x	x	x	N	x	x	Y								No lock
8		x	x	x	x	x	x	N								
4																
11		x	x	x	x	x	x	N								No lock
9		x	x	N	N	x	x	N								
5		x	x	x	N	x	x	N								
1		x	x	x	N	x	x	N								
2075																

N = Not Repairable in time available - see comments
R = Repaired - see comments
ok No action needed
Y = Yes
N = No

S = Soil
W = Water
E = Empty

G = Grafitti on Walls
V = Vagrants (or evidence of)
O = Open (not secure)

Rev:1
FN:WAT

Case	Formula
$r^2 \times 0.163$	2" x 0.163 6" x 1.457 4" x 0.652

Project # 2619 13X

Location# 1455 Gernville Rd South Rosa CA

Date: 12/3/04

Sampler R. Johnson

Well ID	Case Diameter	Odor/Shee	Total Depth	Pre-Purge DTW	DTP	Product Thickness	TOC	Elevation	Notes
MW 10	2		30.00	6.46					
8	4		30.00	3.70					
4	4		15.00	5.03					
11	2		20.00	4.89					
9	4		25.00	4.88					
3	4		40.00	4.91					
1	4		30.5	9.40					
2075	NA								

Case Formula	
$r^2 \times 0.163$	2" x 0.163 6" x 1.457 4" x 0.652

Project # 2619 | Location# 1855 Guerneville Rd. Santa Rosa | Date: 12/31/04 | Sampler D. Daniels

Well ID	Case Diameter	Odor/Shee	Total Depth	Pre-Purge DTW	DTP	Product Thickness	TOC	Elevation	Notes
2050									domestic
MW2	4		24	3.84					14
MW7	4		30	8.17					15
V1	4		12	3.30					DTW only
V2	4		12	4.42					
V3	4		15	4.37					
V4	4		12	6.26					
Weff									On GBS
Wint									
Winf									

4" = 0.652

GROUNDWATER SAMPLING FIELD LOG

CLIENT NAME: Exxon
LOCATION: 1455 Gornville Rd, Santa Rosa
FIELD CREW: R. Johnson

ERI JOB #
FIELD CLEANING PERFORMED
ANALYSIS

DATE: 12/31/04 PAGE 1 OF 2

* Case volume = (TD-DTW) X F where F=
0.163 for a 2" inside diameter well casing
0.652 for a 4" inside diameter well casing
1.467 for a 6" inside diameter well casing

Well ID	Time	Case Volume	Purge Volume	Temp	Cond	PH	Post Purge DTW	80% Recha	BB	40mil	Amber	Comments & Well Box Condition
MW10	10:16	43					7.80			14:11	14:11	
	10:17		43	15.4	415	7.88						
	10:19		86	16.5	418	7.57						
			129	16.7	418	7.22						
MW8	10:45	17					4.47			14:26	14:26	
	10:50		17	18.3	371	7.53						
	10:58		34	19.2	358	7.22						
	11:04		51	19.4	356	6.93						
MW4	11:17	6					5.06			14:54	14:54	
	11:19		6	19.0	334	7.55						well dry @ 15 gal
	11:22		12	20.0	407	7.35						
			18									
MW11	11:57	2					4.90			15:10	15:10	
	12:00		2	18.0	246	7.68						
	12:01		4	18.2	265	7.46						
	12:02		6	18.9	267	7.40						

GROUNDWATER SAMPLING FIELD LOG

CLIENT NAME Exxon
LOCATION 1455 Gernville Rd Santa Rosa
FIELD CREW R. Johnson

ERI JOB #
FIELD CLEANING PERFORMED
ANALYSIS

DATE: 12/31/04

* Case volume = (TD-DTW) X F where F=
0.163 for a 2" inside diameter well casing
0.652 for a 4" inside diameter well casing
1.467 for a 6" inside diameter well casing

Well ID	Time	Case Volume	Purge Volume	Temp	Cond	PH	Post Purge DTW	80% Rechg	BB	40mil	Amber	Comments & Well Box Condition
9	12:19	13					11:40			13:30	13:30	Well Dry
	12:22		13	17.5	8.4	7.41						@ 28 gal
	12:25		26	16.7	477	7.35						
			39									
3	12:46	22					3.40			15:48	15:48	
	12:53		22	17.9	303	7.66						
			44									
			66									
1	13:14	13					8.70			16:14	16:14	
	13:20		13	17.6	556	7.45						
	13:34		26	17.8	582	7.41						
	13:40		39	17.8	596	7.32						
2050 ~~2075~~		—								09:51	09:51	
												Can not be purged

GROUNDWATER SAMPLING FIELD LOG

CLIENT NAME
LOCATION
FIELD CREW

ERI JOB # 2619
FIELD CLEANING PERFORMED
ANALYSIS

DATE:

* Case volume = (TD−DTW) X F where F=
0.163 for a 2" inside diameter well casing
0.652 for a 4" inside diameter well casing
1.467 for a 6" inside diameter well casing

Well ID	Time	Case Volume	Purge Volume	Temp	Cond	PH	Post Purge DTW	80% Rechg	BB	40ml	Amber	Comments & Well Box Condition
W1nf										1410	1420	
							GRS					
W1nf										1420	1420	
							GRS					