ERI

ENVIRONMENTAL RESOLUTIONS, INC.

May 31, 2005
ERI 261913.L22

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

Subject: Laboratory Analysis Results of Groundwater Sample Collected from Private Water Well Located at 2050 Marlow Road, Santa Rosa, California.

Mr. Mahoney:

At the request of Redwood Oil Company (Redwood), Environmental Resolutions, Inc. (ERI) is providing the analytical laboratory results of the groundwater sample collected from the private water well located at 2050 Marlow Road, in Santa Rosa, California, on May 20, 2005. The sample was collected by ERI and analyzed by a California state-certified laboratory, under Chain-of-Custody protocol, for methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and ethanol using Environmental Protection Agency (EPA) Method 8260B; and methanol using EPA Method 8015. Results of laboratory analysis of the water sample are summarized on the attached table.

Please contact Mr. Glenn L. Matteucci, ERI's project manager for this site, at (707) 766-2000 with any questions.

Sincerely,
Environmental Resolutions, Inc.

Karen L. Navarro
Technical Writer

SCANNED IMAGE

Glenn L. Matteucci
Project Manager

Attachment: Private Water Well Sampling Data
Laboratory Analysis Report and Chain-of-Custody Record

cc: Mr. and Mrs. Callison
Ms. Joan Fleck, California Regional Water Quality Control Board, North Coast Region

601 North McDowell Boulevard, Petaluma, California 94954 707-766-2000 FAX 707-789-0414
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TABLE 1A
CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA
Redwood Oil Company Facility 114
1855 Guerneville Road
Santa Rosa, California
(Page 1 of 1)

Well ID # (TOC)	Sample Date	DTW <-----feet----->	Elev.	TPHd <----------ug/L---------->	TPHg	MTBE	B	T	E	X
DW2050	01/31/05	---	---	---	---	22	---	---	---	---
	02/25/05	---	---	---	---	19	---	---	---	---
	03/30/05	---	---	---	---	15	---	---	---	---
	04/22/05	---	---	---	---	20	---	---	---	---
	05/20/05	---	---	---	---	**7.6**	---	---	---	---

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.
Methanol	=	Methanol analyzed using EPA Method 8015.
ug/L	=	Micrograms per liter.
mg/L	=	Milligrams per liter.
---	=	Not measured/Not sampled/Not analyzed.
<	=	Analytes not detected at or above the laboratory reporting limit.
a	=	Analyzed using EPA Method 8260B.
b	=	Not a diesel pattern.

TABLE 1B

ADDITIONAL CUMULATIVE GROUNDWTAER MONITORING AND SAMPLING DATA

Redwood Oil Company Facility 114
1855 Guerneville Road
Santa Rosa, California
(Page 1 of 1)

Well ID #	Sample Date	ETBE	TBA	DIPE	TAME	1,2-DCA	EDB	Ethanol	Methanol
		<----------			ug/L			---------->	mg/L
DW2050	12/31/04	<5	<10	<5	<5	<0.5	<0.5	<100	---
	01/31/05	22	<5	<10	<5	<5	<100	<0.5	
	02/25/05	<5	<10	<5	<5	---	---	<100	---
	03/30/05	<5	<10	<5	<5	---	---	<100	<0.5
	04/22/05	<5	<10	<5	<5	---	---	<100	<0.5
	05/20/05	**<5.0**	**<10.0**	**<5.0**	**<5.0**	**---**	**---**	**<100**	**<0.50**

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.
Methanol	=	Methanol analyzed using EPA Method 8015.
ug/L	=	Micrograms per liter.
mg/L	=	Milligrams per liter.
---	=	Not measured/Not sampled/Not analyzed.
<	=	Analytes not detected at or above the laboratory reporting limit.
a	=	Analyzed using EPA Method 8260B.
b	=	Not a diesel pattern.

Entech Analytical Labs, Inc.

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

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

Certificate ID: 43665 - 5/27/2005 4:08:30 PM

Order Number: 43665
Project Name: Redwood Oil #114
Project Number: 2619

Date Received: 5/23/2005 12:54:40 PM
P.O. Number: 2619

Certificate of Analysis - Final Report

On May 23, 2005, sample was 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	
	Electronic Deliverables	EDF	
	Methanol	EPA 8015	

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

Project ID: 2619
Date Received: 5/23/2005
P.O. Number: 2619
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 43665-001 **Sample ID: 2050** **Matrix:** Liquid **Sample Date:** 5/20/2005 10:43 AM

EPA 8015

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methanol	ND		1	0.50	mg/L	N/A	N/A	5/24/2005	WGC5050524

Surrogate	Surrogate Recovery	Control Limits (%)
1-Butanol	94.7	65 - 135

Analyzed by: mruan
Reviewed by: MaiChiTu

EPA 5030B EPA 8260B EPA 624

Parameter	Result	Qual	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	7.6		1	1.0	µg/L	N/A	N/A	5/27/2005	WMS2050527
tert-Butyl Ethyl Ether	ND		1	5.0	µg/L	N/A	N/A	5/27/2005	WMS2050527
tert-Butanol (TBA)	ND		1	10	µg/L	N/A	N/A	5/27/2005	WMS2050527
Diisopropyl Ether	ND		1	5.0	µg/L	N/A	N/A	5/27/2005	WMS2050527
tert-Amyl Methyl Ether	ND		1	5.0	µg/L	N/A	N/A	5/27/2005	WMS2050527
Ethanol	ND		1	100	µg/L	N/A	N/A	5/27/2005	WMS2050527

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	113	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	112	75 - 125

Analyzed by: Tfulton
Reviewed by: MaiChiTu

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.
Qual = Data Qualifier

Entech Analytical Labs, Inc.

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Method Blank - Liquid - EPA 8015 - Methanol

QC Batch ID: WGC5050524 Validated by: MaiChiTu - 05/25/05

QC Batch Analysis Date: 5/24/2005

Parameter	Result	DF	PQLR	Units
Methanol	ND	1	0.50	mg/L

Surrogate	% Recovery	Control Limits
1-Butanol	89.1	65.0 - 135

Laboratory Control Sample / Duplicate - Liquid - EPA 8015 - Methanol

QC Batch ID: WGC5050524 Reviewed by: MaiChiTu - 05/25/05

QC Batch ID Analysis Date: 5/24/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
Methanol	<0.50	50	44.4	mg/L	88.7	65 - 135

Surrogate	% Recovery	Control Limits
1-Butanol	91.1	65.0 - 135

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
Methanol	<0.50	50	44.0	mg/L	87.9	0.91	25.0	65 - 135

Surrogate	% Recovery	Control Limits
1-Butanol	89.8	65.0 - 135

Matrix Spike / Matrix Spike Duplicate - Liquid - EPA 8015 - Methanol

QC Batch ID: WGC5050524 Reviewed by: MaiChiTu - 05/25/05

QC Batch ID Analysis Date: 5/24/2005

MS Sample Spiked: 43620-006

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	Recovery Limits
Methanol	6.82	50	49.2	mg/L	5/24/2005	84.7	65 - 140

Surrogate	% Recovery	Control Limits
1-Butanol	94.7	65.0 - 135

MSD Sample Spiked: 43620-006

Parameter	Sample Result	Spike Amount	Spike Result	Units	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Methanol	6.82	50	48.8	mg/L	5/24/2005	83.9	1.0	25.0	65 - 140

Surrogate	% Recovery	Control Limits
1-Butanol	92.0	65.0 - 135

Entech Analytical Labs, Inc.

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

Method Blank - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WMS2050527 Validated by: MaiChiTu - 05/27/05

QC Batch Analysis Date: 5/27/2005

Parameter	Result	DF	PQLR	Units
Diisopropyl Ether	ND	1	5.0	µg/L
Ethanol	ND	1	100	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**114.1**	75.0 - 125
Dibromofluoromethane	**106.1**	75.0 - 125
Toluene-d8	**110.7**	75.0 - 125

Laboratory Control Sample / Duplicate - Liquid - EPA 8260B - 8260Petroleum

QC Batch ID: WMS2050527 Reviewed by: MaiChiTu - 05/27/05

QC Batch ID Analysis Date: 5/27/2005

LCS

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene	<0.50	20	17.6	µg/L	87.9	80 - 120
Benzene	<0.50	20	19.3	µg/L	96.7	80 - 120
Chlorobenzene	<0.50	20	19.4	µg/L	96.8	80 - 120
Methyl-t-butyl Ether	<1.0	20	21.5	µg/L	107	80 - 120
Toluene	<0.50	20	19.3	µg/L	96.6	80 - 120
Trichloroethene	<0.50	20	20.6	µg/L	103	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**116.6**	75.0 - 125
Dibromofluoromethane	**113.5**	75.0 - 125
Toluene-d8	**111.7**	75.0 - 125

LCSD

Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.50	20	18.0	µg/L	89.9	**2.2**	25.0	80 - 120
Benzene	<0.50	20	19.3	µg/L	96.5	**0.18**	25.0	80 - 120
Chlorobenzene	<0.50	20	19.8	µg/L	99.0	**2.3**	25.0	80 - 120
Methyl-t-butyl Ether	<1.0	20	21.0	µg/L	105	**2.5**	25.0	80 - 120
Toluene	<0.50	20	19.7	µg/L	98.4	**1.9**	25.0	80 - 120
Trichloroethene	<0.50	20	20.8	µg/L	104	**1.2**	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**114.0**	75.0 - 125
Dibromofluoromethane	**107.9**	75.0 - 125
Toluene-d8	**109.5**	75.0 - 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: Glenn Matteucci	Phone No.: (707) 766-2030	Purchase Order No.:	Invoice to: (If Different) John Mahoney	Phone:
Company Name: Environmental Resolutions, Inc.	Fax No.: (707) 789-0414	Project No.: 2619	Company: Redwood Oil	Quote No.:
Mailing Address: 601 N. McDowell Blvd.	Email Address: mlinale@eri-us.com	Project Name: Redwood Oil #114	Billing Address: (If Different) 455 Yolanda Ave.	
City: Petaluma / State: CA / Zip Code: 94954		Project Location: 1855 Guerneville Rd.	City: Santa Rosa / State: CA	Zip: 95404

Sampler: V Burns
Field Org. Code:
Global ID: T0609700601

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 ☐ by 8260B	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 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
2050	436605-001	5-20-05	1043		5			X				X					

Relinquished by:	Received by:	Date:	Time:
Vicki Burns	Smal Inc	5-20-05	
Vicki Burns	[illegible]	5-23-05	0920

Special Instructions or Comments
Email 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