#245

EXXON COMPANY, U.S.A.

P.O. BOX 4032 • CONCORD, CA 94524-4032
MARKETING DEPARTMENT • ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER
SENIOR ENGINEER

(925) 246-8776
(925) 246-8798 FAX

June 5, 1998

Mr. Barney Chan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

RE: Exxon RAS #7-0238/2200 East 12th Street, Oakland, California.

Dear Mr. Chan:

Attached for your review and comment is a letter report entitled ***Quarterly Groundwater Monitoring, Second Quarter 1998,*** dated May 29, 1998, for the above referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details the results of the quarterly groundwater monitoring activities at the subject site.

If you have any questions or comments, please contact me at (925) 246-8776.

Sincerely,

Marla D. Guensler
Senior Engineer

MDG/tjm

Attachment: ERI's Quarterly Groundwater Monitoring Report, Second Quarter 1998, dated May 29, 1998

cc: w/attachment
Mr. Stephen Hill - California Regional Water Quality Control Board, San Francisco Bay Region
415-382-5991

w/o attachment
Mr. Marc A. Briggs - (ERI) no longer there - 03

Tracy Faulkner (415) 458-0298 page

ENVIRONMENTAL RESOLUTIONS, INC.

May 29, 1998
ERI 229313.R01

Ms. Marla D. Guensler
Exxon Company, U.S.A.
P.O. Box 4032
Concord, California 94524-4032

Subject: Quarterly Groundwater Monitoring, Second Quarter 1998, Exxon Service Station 7-0238, 2200 East 12th Street, Oakland, California.

Ms. Guensler:

At the request of Exxon Company, U.S.A. (Exxon), Environmental Resolutions, Inc. (ERI) performed the second quarter 1998 groundwater monitoring at the subject site (Plate 1). The purpose of quarterly monitoring is to evaluate fluctuations in dissolved hydrocarbon concentrations in groundwater and groundwater flow direction and gradient.

GROUNDWATER MONITORING AND SAMPLING

On April 21, 1998, ERI measured depth to water (DTW) in monitoring wells MW9A through MW9D, and MW9I and collected groundwater samples from these wells for laboratory analysis. Offsite monitoring wells MW9F and MW9G were not sampled due to lack of offsite access, and monitoring well MW9H could not be located. No measurable liquid phase hydrocarbons were observed in the monitoring wells. ERI's groundwater sampling protocol is attached (Attachment A).

Based on DTW measurements the groundwater appears to flow west with a hydraulic gradient of 0.012 (Plate 2). Historical and recent monitoring data are summarized in Table 1.

LABORATORY ANALYSES AND RESULTS

Groundwater samples were submitted to Sequoia Analytical Laboratories (California State Certification Number 1210) in Redwood City, California, under chain of custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary-butyl ether (MTBE), and total petroleum hydrocarbons as gasoline (TPHg), using the methods listed in the notes in Table 1. The laboratory analysis reports and chain of custody records are attached (Attachment B). Current and historic results of laboratory analysis of groundwater samples are summarized in Table 1. The results of analyses of groundwater samples collected during the recent sampling event are shown on Plate 2.

LIMITATIONS

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

If you have any questions or comments regarding this report, please call (415) 382-5988.

Sincerely,
Environmental Resolutions, Inc.

Paul D. Blank
Environmental Technician

Keith A. Romstad
Branch Manager

Enclosures: Table 1: Cumulative Groundwater Monitoring and Sampling Data

Plate 1: Site Vicinity Map
Plate 2: Generalized Site Plan

Attachment A: Groundwater Sampling Protocol
Attachment B: Laboratory Analysis Reports and Chain of Custody Record

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0238
2200 East 12th Street
Oakland, California

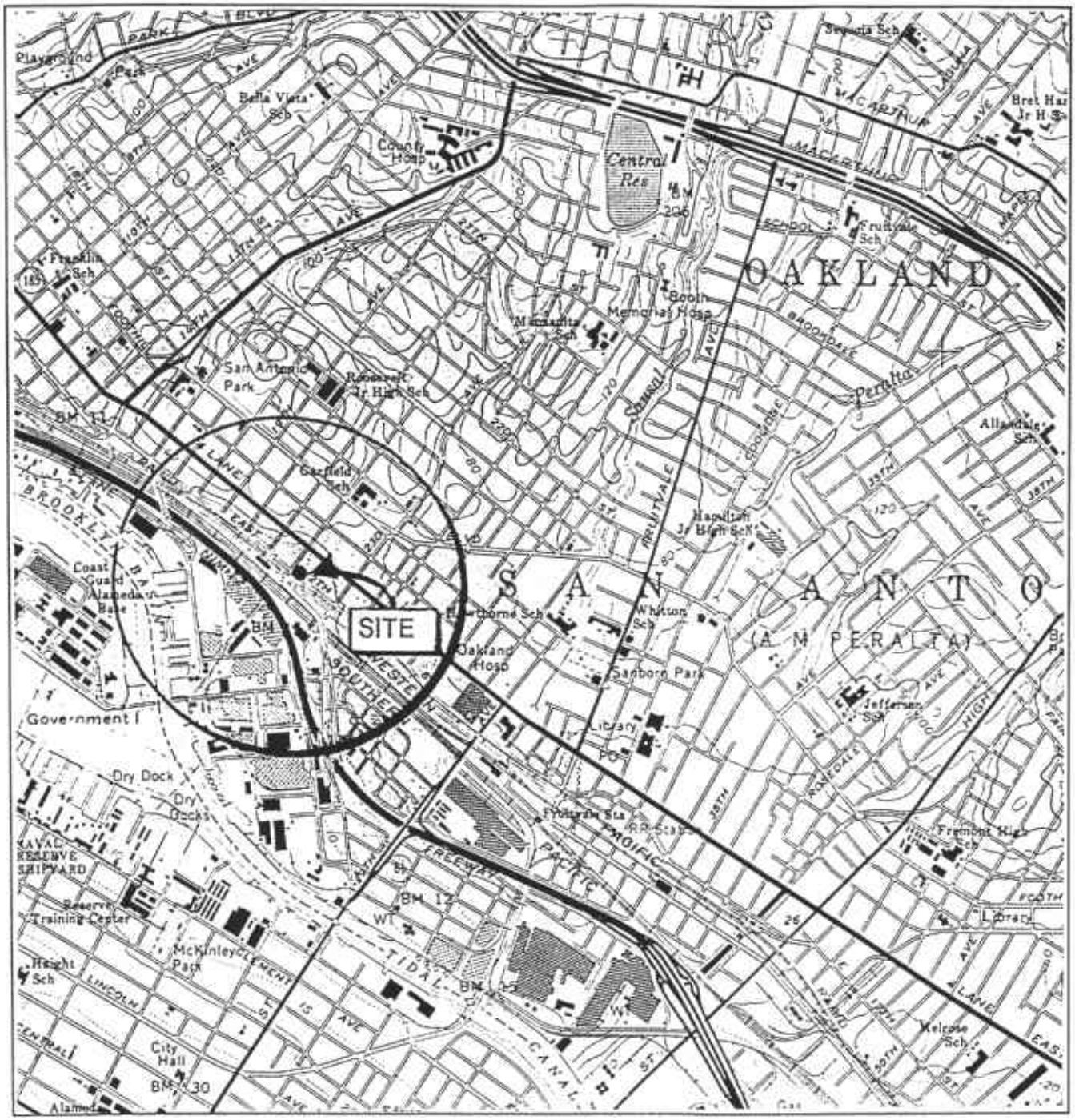
Well ID # (TOC)	Sampling Date	SUBJ	DTW feet	Elev.	TPPHg	B	T	E	X	MTBE
		<		> <	parts per billion					>
MW9A	11/2/95	NLPH	7.16	4.30	<50	<0.5	<0.5	<0.5	<0.5	<10
(11.46)	4/26/96	NLPH	6.33	5.13	---	---	---	---	---	---
	8/22/96	NLPH	7.02	4.44	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	6.14	5.32	<200	7.9	<2.0	<2.0	<2.0	40,000
	4/21/98	NLPH	6.29	5.17	<50	3.8	<0.5	<0.5	<0.5	53,000
MW9B	11/2/95	NLPH	6.14	3.66	130	3.3	<0.5	<0.5	<0.5	<10
(9.80)	4/26/96	NLPH	5.66	4.14	270	130	2.8	6.7	<3	70
	8/22/96	NLPH	6.16	3.64	210	5.7	6.8	1.1	9.2	31
	2/24/97	NLPH	5.58	4.22	1,400	76	1.4	4.1	1.2	1,300
	3/16/98	NLPH	5.32	4.48	860	140	2.0	11	<2.0	1,500
	4/21/98	NLPH	5.49	4.31	1,800	300	<5.0	7.9	<5.0	18,000
MW9C	11/2/95	---	---	---	---	---	---	---	---	---
(11.14)	4/26/96	---	---	---	---	---	---	---	---	---
	8/22/96	---	---	---	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	5.51	5.63	<500	24	<5.0	<5.0	<5.0	150,000
	4/21/98	NLPH	5.83	5.31	150	<0.5	<0.5	<0.5	<0.5	130,000/150,000*
MW9D	11/2/95	---	---	---	---	---	---	---	---	---
(12.90)	4/26/96	---	--	--	---	---	---	---	---	---
	8/22/96	---	---	---	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	6.94	5.96	<50	<0.5	<0.5	<0.5	<0.5	10
	4/21/98	NLPH	7.22	5.68	<50	<0.5	<0.5	<0.5	<0.5	12
MW9F	11/2/95	---	---	---	---	---	---	---	---	---
(8.37)	4/26/96	NLPH	---	---	<50	<0.5	<0.5	<0.5	<0.5	57
	8/22/96	NLPH	---	---	<50	<0.5	<0.5	<0.5	<0.5	5.8
	2/24/97	NLPH	---	---	<50	<0.5	<0.5	<0.5	<0.5	<30
	3/16/98	NLPH	---	---	---	---	---	---	---	---
	4/21/98	---	---	---	---	---	---	---	---	---

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Exxon Service Station 7-0238
2200 East 12th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW feet	Elev.	TPPHg	B	T	E	X	MTBE
		<		> <			parts per billion			>
MW9G	11/2/95	NLPH	5.92	4.03	<50	<0.5	<0.5	<0.5	<0.5	<10
(9.95)	4/26/96	NLPH	5.28	4.67	<50	<0.5	<0.5	<0.5	<0.5	18
	8/22/96	NLPH	5.57	4.38	<50	<0.5	<0.5	<0.5	<0.5	18
	2/24/97	NLPH	5.30	4.65	<50	<0.5	0.57	<0.5	0.62	240
	3/16/98	---	---	---	---	---	---	---	---	---
	4/21/98	---	---	---	---	---	---	---	---	---
MW9H	11/2/95	NLPH	8.40	0.18	<50	<0.5	<0.5	<0.5	<0.5	<10
(8.58)	4/26/96	NLPH	8.05	0.53	---	---	---	---	---	---
	8/22/96	NLPH	8.17	0.41	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	---	---	---	---	---	--	---	---	---
	4/21/98	---	---	---	---	---	---	---	---	---
MW9I	11/2/95	NLPH	6.04	4.07	<50	<0.5	<0.5	<0.5	<0.5	<10
(10.11)	4/26/96	NLPH	5.27	4.84	<50	<0.5	<0.5	<0.5	<0.5	99
	8/22/96	NLPH	5.66	4.45	<50	<0.5	<0.5	<0.5	<0.5	170
	2/24/97	NLPH	5.24	4.87	120	<0.5	<0.5	<0.5	<0.5	9,100
	3/16/98	NLPH	4.91	5.20	<200	13	<2.0	<2.0	<2.0	59,000
	4/21/98	NLPH	5.08	5.03	<500	<5.0	<5.0	<5.0	<5.0	59,000

Notes:

SUBJ	=	Results of subjective evaluation
NLPH	=	No liquid-phase hydrocarbons present in well
TOC	=	Elevation of top of well casing; relative to mean sea level
DTW	=	Depth to water
Elev.	=	Elevation of groundwater surface; relative to mean sea level
TPPHg	=	Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA method 5030/8015 (modified).
BTEX	=	Benzene, Toluene, Ethylbenzene, and total Xylenes using EPA method 5030/8020.
MTBE	=	Methyl tertiary-butyl ether analyzed using EPA method 5030/8020.
<	=	Less than the indicated detection limit shown by the laboratory
---	=	Not measured or sampled
*	=	MTBE confirmed using EPA method 8260.



FN: 22930001

EXPLANATION

N

Source U.S.G.S. 7.5 minute topographic quadrangle map Oakland East, California (Photorevised 1980)

APPROXIMATE SCALE

0 1/2 1

MILE

ERI ENVIRONMENTAL RESOLUTIONS, INC.

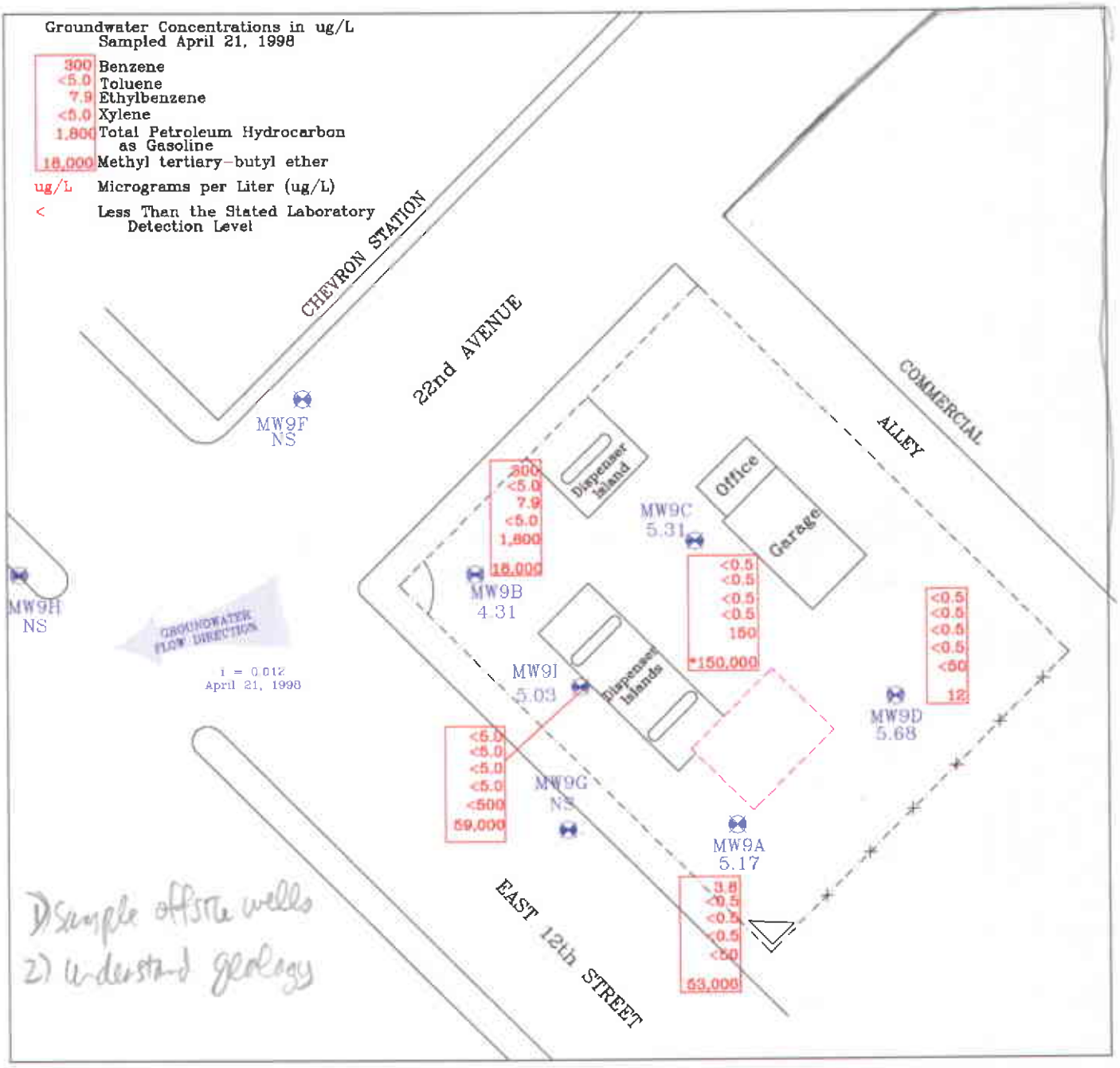
PROJECT ERI 2293

SITE VICINITY MAP

EXXON SERVICE STATION 7-0238
2200 East 12th Street
Oakland, California

PLATE

1



FN 22930002

EXPLANATION

MW9I
Groundwater Monitoring Well
Groundwater Elevation (April 21, 1998)

NS Not Sampled

------ Underground Storage Tanks

* MTBE confirmed utilizing EPA method 8260

N

APPROXIMATE SCALE

0 50 100 FEET

SOURCE:
Modified from a map provided by
EXXON COMPANY, U.S.A.

ERI ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

EXXON SERVICE STATION 7-0238
2200 East 12th Street
Oakland, California

PROJECT NO. 2293

PLATE 2

May 20, 1998

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 a MMC 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 wellhead elevations.

Groundwater samples collected for subjective evaluation are collected by gently lowering approximately half the length of a clean Teflon® 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. Any free-phase hydrocarbons are removed from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until stabilization of the temperature, pH, and conductivity is obtained, or until a minimum of three well casing volumes are purged. 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 = $\pi\ r^2h(7.48)$ 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	=	3.1418

Gallons of water purged/gallons in one 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® bailer. The groundwater is carefully poured into 40-milliliter (ml) glass vials, which are filled so as to produce a positive meniscus. Each vial is preserved with hydrochloric acid, 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-certified laboratory.

ATTACHMENT B

LABORATORY ANALYSIS REPORTS AND CHAIN OF CUSTODY RECORD

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions
74 Digital Drive , Suite 6
Novato, CA 94949

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0238, 229313X
Sample Descript: W-5-MW9I
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9804F52-01

Sampled: 04/21/98
Received: 04/22/98

Analyzed: 04/28/98
Reported: 05/06/98

QC Batch Number: GC042898BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	**500**	**59000**
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	73

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herlihy
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions	Client Proj. ID: Exxon 7-0238, 229313X	Sampled: 04/21/98
74 Digital Drive , Suite 6	Sample Descript: W-6-MW9A	Received: 04/22/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/30/98
Attention: Marc Briggs	Lab Number: 9804F52-02	Reported: 05/06/98

QC Batch Number: GC043098BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**1000**	**53000**
Benzene	**0.50**	**3.8**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions	Client Proj. ID: Exxon 7-0238, 229313X	Sampled: 04/21/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9C	Received: 04/22/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/28/98
Attention: Marc Briggs	Lab Number: 9804F52-03	Reported: 05/06/98

QC Batch Number: GC042898BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	150
Methyl t-Butyl Ether	1000	130000
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Unidentified HC		C6-C8

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	85

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions	Client Proj. ID: Exxon 7-0238, 229313X	Sampled: 04/21/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9C	Received: 04/22/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 04/29/98
Attention: Marc Briggs	Lab Number: 9804F52-03	Reported: 05/06/98

QC Batch Number: MS042998MTBEF3A
nstrument ID: F3

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	1000	150000

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions	Client Proj. ID: Exxon 7-0238, 229313X	Sampled: 04/21/98
74 Digital Drive , Suite 6	Sample Descript: W-7-MW9D	Received: 04/22/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/28/98
Attention: Marc Briggs	Lab Number: 9804F52-04	Reported: 05/06/98

QC Batch Number: GC042898BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**12**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	85

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions
74 Digital Drive , Suite 6
Novato, CA 94949

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0238, 229313X
Sample Descript: W-5-MW9B
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9804F52-05

Sampled: 04/21/98
Received: 04/22/98

Analyzed: 04/30/98
Reported: 05/06/98

QC Batch Number: GC043098BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**1800**
Methyl t-Butyl Ether	**250**	**18000**
Benzene	**5.0**	**300**
Toluene	5.0	N.D.
Ethyl Benzene	**5.0**	**7.9**
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Richard Herling
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions
74 Digital Drive, Suite 6
Novato, CA 94949
Attention: Marc Briggs

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9804F52-01,03,04

Reported: May 6, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015/8020
Analyst: C. Demartini

BTEX	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX as TPH
QC Batch #:	GC042898BTEX02A				
Sample No.:	GW9804D91-3				
Date Prepared:	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98
Date Analyzed:	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30	60
Matrix Spike, ug/L:	8.9	9.0	9.3	28	66
% Recovery:	89	90	93	93	110
Matrix Spike Duplicate, ug/L:	9.3	9.5	9.6	29	68
% Recovery:	93	95	96	97	113
Relative % Difference:	4.4	5.4	3.2	4.2	2.7
RPD Control Limits:	0-25	0-25	0-25	0-25	0-25

LCS Batch#:	GAWBLK042898A				
Date Prepared:	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98
Date Analyzed:	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked, ug/L:	10	10	10	30	60
LCS Recovery, ug/L:	9.2	9.3	9.6	29	68
LCS % Recovery:	92	93	96	97	113

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130

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

SEQUOIA ANALYTICAL

Richard Herling
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions
74 Digital Drive, Suite 6
Novato, CA 94949
Attention: Marc Briggs

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9804F52-02,05

Reported: May 6, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015/8020
Analyst: C. Demartini

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX as TPH
QC Batch #:	GC043098BTEX21A				
Sample No.:	GW9804F78-10				
Date Prepared:	4/30/98	4/30/98	4/30/98	4/30/98	4/30/98
Date Analyzed:	4/30/98	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30	60
Matrix Spike, ug/L:	9.6	9.5	9.7	29	57
% Recovery:	96	95	97	97	95
Matrix Spike Duplicate, ug/L:	9.5	9.3	9.5	28	55
% Recovery:	95	93	95	93	92
Relative % Difference:	1.0	2.1	2.1	4.2	3.2
RPD Control Limits:	0-25	0-25	0-25	0-25	0-25

LCS Batch#:	GAWBLOK043098A				
Date Prepared:	4/30/98	4/30/98	4/30/98	4/30/98	4/30/98
Date Analyzed:	4/30/98	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked, ug/L:	10	10	10	30	60
LCS Recovery, ug/L:	9.9	9.7	9.9	30	56
LCS % Recovery:	99	97	99	100	93

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130

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

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Richard Herling
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions
74 Digital Drive, Suite 6
Novato, CA 94949
Attention: Marc Briggs

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9804F52-01-03

Reported: May 6, 1998

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8015/8020
Analyst: C. Demartini

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX as TPH
QC Batch #:	GC042998BTEX21A				
Sample No.:	GW9804C47-8				
Date Prepared:	4/29/98	4/29/98	4/29/98	4/29/98	4/29/98
Date Analyzed:	4/29/98	4/29/98	4/29/98	4/29/98	4/29/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30	60
Matrix Spike, ug/L:	9.5	9.4	9.5	29	47
% Recovery:	95	94	95	97	78
Matrix Spike Duplicate, ug/L:	9.5	9.4	9.6	29	47
% Recovery:	95	94	96	97	78
Relative % Difference:	0.0	0.0	1.0	0.0	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25	0-25

LCS Batch#:	GAWBLK042998A				
Date Prepared:	4/29/98	4/29/98	4/29/98	4/29/98	4/29/98
Date Analyzed:	4/29/98	4/29/98	4/29/98	4/29/98	4/29/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked, ug/L:	10	10	10	30	60
LCS Recovery, ug/L:	9.7	9.5	9.8	30	49
LCS % Recovery:	97	95	98	100	82

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130

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

SEQUOIA ANALYTICAL

Richard Herling
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions	Client Project ID:	Exxon 7-0238, 229313X	
74 Digital Drive, Ste. 6	Matrix:	Liquid	
Novato, CA 94949			
Attention: Marc Briggs	Work Order #:	9804F52 03	Reported: May 8, 1998

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS042998MTBEF3A
Analy. Method:	EPA 8260
Prep. Method:	

Analyst:	E. Manuel
MS/MSD #:	9804G5001
Sample Conc.:	N.D.
Prepared Date:	N.A.
Analyzed Date:	4/29/98
Instrument I.D.#:	F3
Conc. Spiked:	50 µg/L
Result:	54
MS % Recovery:	108
Dup. Result:	50
MSD % Recov.:	100
RPD:	7.7
RPD Limit:	0-25

LCS #:	LCS042998
Prepared Date:	N.A.
Analyzed Date:	4/29/98
Instrument I.D.#:	F3
Conc. Spiked:	50 µg/L
LCS Result:	49
LCS % Recov.:	98

MS/MSD	60-140
LCS	70-130
Control Limits	

SEQUOIA ANALYTICAL

Richard Hexling
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

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

Sequoia Analytical
680 Chesapeake Dr.
Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

EXXON COMPANY, U.S.A.

P.O. Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

98-04-F52

Consultant's Name: ENVIRONMENTAL RESOLUTIONS, INC.			**Page** 1 of 1
Address: 74 DIGITAL DR, SUITE 6, NOVATO, CA 94949			**Site Location:** 2200 E. 12TH ST.
Project #:	**Consultant Project #:** 22931.3X		**Consultant Work Release #:** 19802889
Project Contact: MARC BRIGGS	**Phone #:** (415) 382-5991		**Laboratory Work Release #:**
EXXON Contact: MARLA GUENSLER	**Phone #:** (510) 246-8776		**EXXON RAS #:** 7-0238
Sampled by (print): PAUL BLANK	**Sampler's Signature:** Paul D. Blank		OAKLAND
Shipment Method:	**Air Bill #:**		

TAT: ☐ 24 hr ☐ 48 hr ☐ 72 hr ☐ 96 hr ☒ Standard (10 day)

ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/ 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520	MTBE 8020		Temperature: _____ Inbound Seal: Yes No Outbound Seal: Yes No
W-5-MW9F	4-21-98	1235	WATER	HCl	3	01	X			X		
W-6-MW9A	"	1245	"	"	"	02	X			X		
W-5-MW9C	"	1255	"	"	"	03	X			X		
W-7-MW9D	"	1305	"	"	"	04	X			X		
W-5-MW9B	"	1315	"	"	"	05	X			X		

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Paul D Blank	4-22-98	10:22	SEQUOIA	4/22	10:22	
					17:38	

Pink - Client
Yellow - Sequoia
White - Sequoia

38

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions
74 Digital Drive , Suite 6
Novato, CA 94949
Attention: Marc Briggs

Client Proj. ID: Exxon 7-0238, 229313X
Lab Proj. ID: 9804F52

Received: 04/22/98
Reported: 05/06/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 12 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

MTBE Note: The samples 9804F52-01,02 & 03 were analyzed twice for MTBE. MTBE is reported from the QC batch GC042998BTEX21A.

The sample 9804F52-05 was analyzed twice for MTBE. MTBE is reported from the QC batch GC043098BTEX21A.

This project was revised on May 6, 1998.

SEQUOIA ANALYTICAL

Richard Herling
Project Manager