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

99 FEB 16 PM 4:56

245

FEB 10 1999

need determine if
present pathways exist
verify no ongoing rebound occurring
Any CAP?

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

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, Fourth Quarter 1998,*** dated January 28, 1999, 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 and sampling 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, Fourth Quarter 1998, dated January 28, 1999.

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

w/o attachment
Mr. Mark S. Dockum - Environmental Resolutions, Inc.

ENVIRONMENTAL RESOLUTIONS, INC.

January 28, 1999
ERI 229313.R03

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

Subject: Quarterly Groundwater Monitoring, Fourth 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 fourth quarter 1998 groundwater monitoring at the subject site (Plate 1). The purpose of quarterly monitoring is to evaluate dissolved hydrocarbon concentrations in groundwater and groundwater flow direction and gradient.

GROUNDWATER MONITORING AND SAMPLING

On December 22, 1998, ERI measured depth to water (DTW) in monitoring wells MW9A through MW9D and wells MW9F through MW9I and collected groundwater samples from these wells for laboratory analysis. No measurable liquid phase hydrocarbons were observed in the monitoring wells. Groundwater monitoring and sampling were performed in accordance with ERI's groundwater sampling protocol (Attachment A).

Based on DTW measurements the groundwater appears to flow west with a hydraulic gradient of 0.016 (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 purgeable petroleum hydrocarbons as gasoline (TPPHg), 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 practice in California at the time this investigation was performed. This report has been prepared for Exxon Company, U.S.A. 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.

Scott R. Graham
Staff Geologist

Mark S. Dockum
R.G. 4412
C.E.G. 1675

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	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<	ug/L				>
MW9A	11/2/95	NLPH	7.16	4.30	<50	<10	<0.5	<0.5	<0.5	<0.5
(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	40,000	7.9	<2.0	<2.0	<2.0
	4/21/98	NLPH	6.29	5.17	<50	53,000	3.8	<0.5	<0.5	<0.5
(14.53)	7/22/98	NLPH	6.58	7.95	<250	18,000	<2.5	<2.5	<2.5	<2.5
	12/22/98	NLPH	6.47	8.06	<50	5,200	<0.50	<0.50	<0.50	<0.50
MW9B	11/2/95	NLPH	6.14	3.66	130	<10	3.3	<0.5	<0.5	<0.5
(9.80)	4/26/96	NLPH	5.66	4.14	270	70	130	2.8	6.7	<3
	8/22/96	NLPH	6.16	3.64	210	31	5.7	6.8	1.1	9.2
	2/24/97	NLPH	5.58	4.22	1,400	1,300	76	1.4	4.1	1.2
	3/16/98	NLPH	5.32	4.48	860	1,500	140	2.0	11	<2.0
	4/21/98	NLPH	5.49	4.31	1,800	18,000	300	<5.0	7.9	<5.0
(12.83)	7/22/98	NLPH	5.79	7.04	<500	26,000	13	<5.0	<5.0	<5.0
	12/22/98	NLPH	5.69	7.14	700	21,000	110	3.1	9.1	14
MW9C	11/2/95	---	---	---	---	---	---	---	---	---
(11.14)	4/26/96	---	---	---	---	---	---	---	---	---
	8/22/96	---	---	---	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	5.51	5.63	<500	150,000	24	<5.0	<5.0	<5.0
	4/21/98	NLPH	5.83	5.31	150	130,000/150,000*	<0.5	<0.5	<0.5	<0.5
(14.19)	7/22/98	NLPH	6.43	7.76	<500	95,000	<5.0	<5.0	<5.0	<5.0
	12/22/98	NLPH	6.16	8.03	<500	84,000	<5.0	<5.0	<5.0	<5.0
MW9D	11/2/95	---	---	---	---	---	---	---	---	---
(12.90)	4/26/96	---	--	--	---	---	---	---	---	---
	8/22/96	---	---	---	---	---	---	---	---	---
	2/24/97	---	---	---	---	---	---	---	---	---
	3/16/98	NLPH	6.94	5.96	<50	10	<0.5	<0.5	<0.5	<0.5
	4/21/98	NLPH	7.22	5.68	<50	12	<0.5	<0.5	<0.5	<0.5
(15.98)	7/22/98	NLPH	7.85	8.13	<50	13	<0.5	<0.5	<0.5	<0.5
	12/22/98	NLPH	7.58	8.40	<50	12	<0.50	<0.50	<0.50	<0.50

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

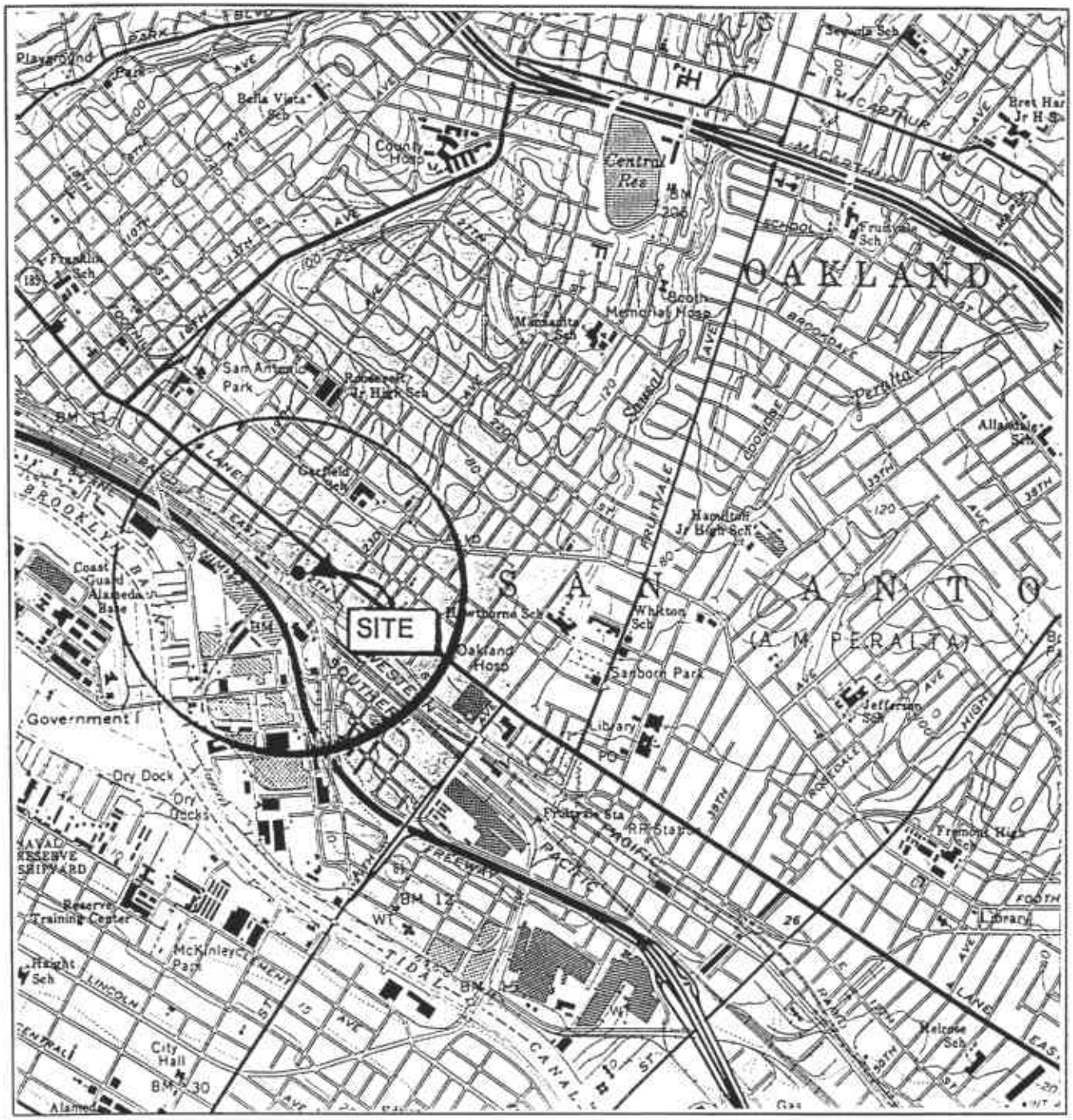
Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<		ug/L			>
MW9F	11/2/95	---	---	---	---	---	---	---	---	---
(8.37)	4/26/96	NLPH	---	---	<50	57	<0.5	<0.5	<0.5	<0.5
	8/22/96	NLPH	---	---	<50	5.8	<0.5	<0.5	<0.5	<0.5
	2/24/97	NLPH	---	---	<50	<30	<0.5	<0.5	<0.5	<0.5
	3/16/98	NLPH	---	---	---	---	---	---	---	---
	4/21/98	---	---	---	---	---	---	---	---	---
(11.38)	7/22/98	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	5.47	5.91	<50	81	<0.50	<0.50	<0.50	<0.50
MW9G	11/2/95	NLPH	5.92	4.03	<50	<10	<0.5	<0.5	<0.5	<0.5
(9.95)	4/26/96	NLPH	5.28	4.67	<50	18	<0.5	<0.5	<0.5	<0.5
	8/22/96	NLPH	5.57	4.38	<50	18	<0.5	<0.5	<0.5	<0.5
	2/24/97	NLPH	5.30	4.65	<50	240	<0.5	0.57	<0.5	0.62
	3/16/98	---	---	---	---	---	---	---	---	---
	4/21/98	---	---	---	---	---	---	---	---	---
(12.99)	7/22/98	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	5.28	7.71	<50	1,100	<0.50	<0.50	<0.50	<0.50
MW9H	11/2/95	NLPH	8.40	0.18	<50	<10	<0.5	<0.5	<0.5	<0.5
(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	---	---	---	---	---	---	---	---	---
(11.61)	7/22/98	---	---	---	---	---	---	---	---	---
	12/22/98	NLPH	7.81	3.80	<50	<2.5	<0.50	<0.50	<0.50	<0.50
MW9I	11/2/95	NLPH	6.04	4.07	<50	<10	<0.5	<0.5	<0.5	<0.5
(10.11)	4/26/96	NLPH	5.27	4.84	<50	99	<0.5	<0.5	<0.5	<0.5
	8/22/96	NLPH	5.66	4.45	<50	170	<0.5	<0.5	<0.5	<0.5
	2/24/97	NLPH	5.24	4.87	120	9,100	<0.5	<0.5	<0.5	<0.5
	3/16/98	NLPH	4.91	5.20	<200	59,000	13	<2.0	<2.0	<2.0
	4/21/98	NLPH	5.08	5.03	<500	59,000	<5.0	<5.0	<5.0	<5.0
(13.14)	7/22/98	NLPH	5.44	7.70	<500	62,000	<5.0	<5.0	<5.0	<5.0
	12/22/98	NLPH	5.32	7.82	200	51,000	1.7	<0.50	<0.50	<0.50

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	Elev.	TPPHg	MTBE	B	T	E	X
		<	feet	>	<		ug/L			>

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).
MTBE	=	Methyl tertiary butyl ether analyzed using EPA method 5030/8020.
BTEX	=	Benzene, Toluene, Ethylbenzene, and total Xylenes 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.

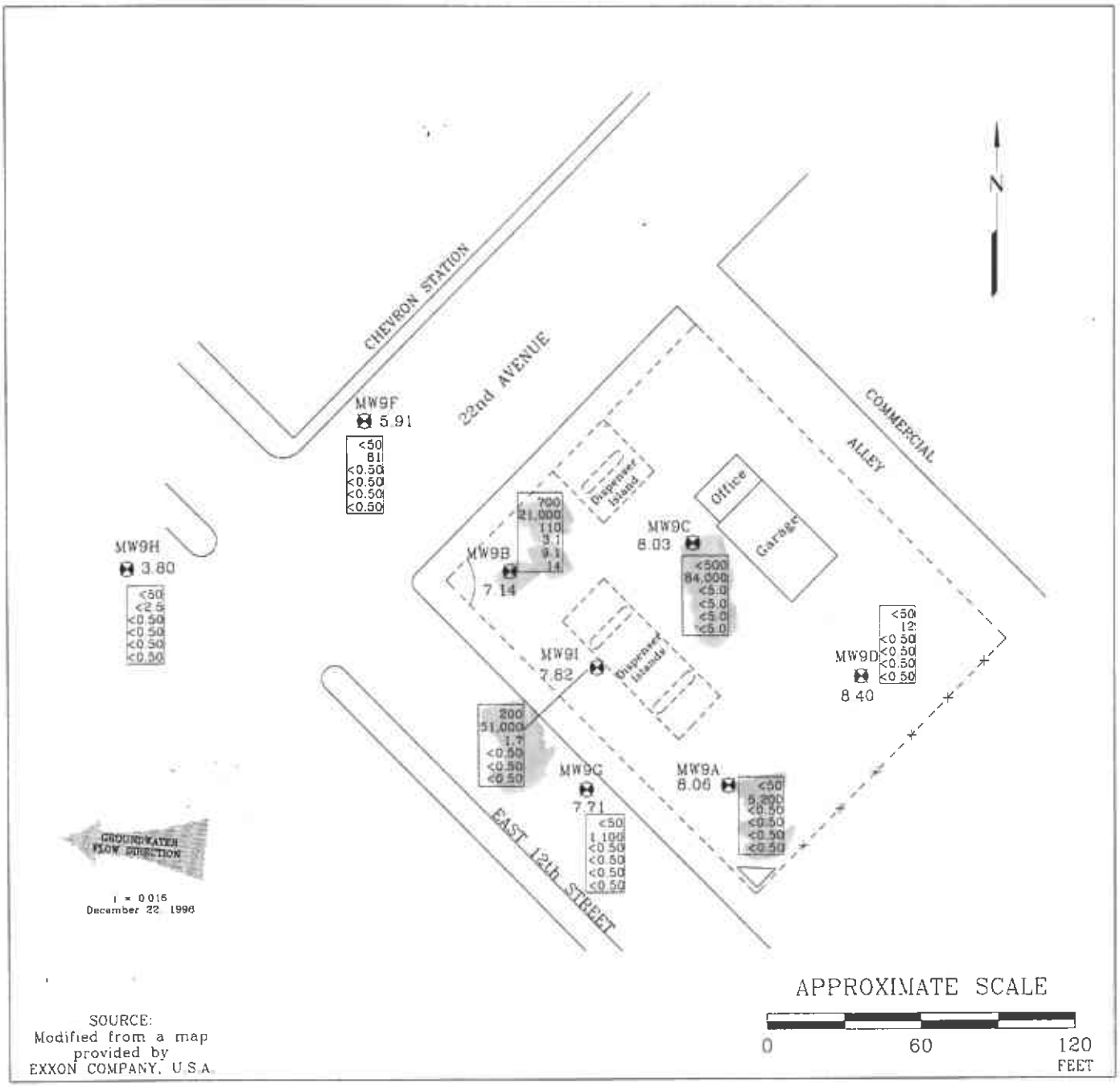
PROJECT ERI 2293

SITE VICINITY MAP

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

PLATE

1



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

FN 22930002

EXPLANATION

MW9I

Groundwater Monitoring Well
Groundwater Elevation (April 21, 1998)

7.82 Groundwater elevation in feet above mean sea level

I = Interpreted Groundwater Gradient

Groundwater Concentrations in ug/L
Sampled December 22, 1998

700	Total Purgeable Petroleum Hydrocarbon as gasoline
21,000	Methyl Tertiary Butyl Ether
110	Benzene
3.1	Toluene
9.1	Ethylbenzene
14	Xylenes
ug/L	Micrograms per Liter (ug/L)
<	Less Than the Stated Laboratory Detection Level

ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

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

PROJECT NO.
2293

PLATE
2

January 15, 1999

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 = $\pi r^2 h(7.48)$ 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 circle to its diameter

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

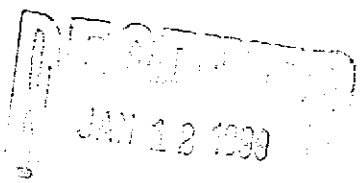
680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Environmental Resolutions	Client Proj. ID: Exxon 7-0238,229313X	Received: 12/28/98
74 Digital Drive , Suite 6		
Novato, CA 94949	Lab Proj. ID: 9812G34	Reported: 01/08/99
Attention: Mark Dockum		

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.).

Samples W-5-MW9G(9812G34-02), W-5-MW9B(9812G34-06), W-5-MW9I(9812G34-07) and W-6-MW9C(9812G34-08) were all analyzed twice to quantitate for MTBE.



SEQUOIA ANALYTICAL

Mei Mei Shin
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, (925) 988-9600, FAX (925) 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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9F	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-01	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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**	**81**
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	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9G	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-02	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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**	**1100**
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	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-7-MW9H	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-03	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-7-MW9D	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-04	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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	95

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-6-MW9A	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-05	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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	**125**	**5200**
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	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9B	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/05/99
Attention: Mark Dockum	Lab Number: 9812G34-06	Reported: 01/08/99

QC Batch Number: GC010599BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	700
Methyl t-Butyl Ether	500	21000
Benzene	2.5	110
Toluene	2.5	3.1
Ethyl Benzene	2.5	9.1
Xylenes (Total)	2.5	14
Chromatogram Pattern:		GAS

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9l	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-07	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
nstrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**200**
Methyl t-Butyl Ether	**1250**	**51000**
Benzene	**0.50**	**1.7**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**<C10**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103

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

SEQUOIA ANALYTICAL - ELAP #1210

ei Mei Shin
roject Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-6-MW9C	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-08	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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	**1250**	**84000**
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	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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Environmental Resolutions
74 Digital drive, Suite 6
Novato, CA 94949
Attention: Mark Dockum

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9812G34

Reported: Jan 8, 1999

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: MM

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #: GC010599BTEX17A				
Sample No.: GW9901101-1				
Date Prepared:	1/5/99	1/5/99	1/5/99	1/5/99
Date Analyzed:	1/5/99	1/5/99	1/5/99	1/5/99
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	9.0	9.0	9.4	28
% Recovery:	90	90	94	93
Matrix Spike Duplicate, ug/L:	9.3	9.3	9.9	28
% Recovery:	93	93	99	93
Relative % Difference:	3.3	3.3	5.2	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#: GC010599BTEX17A				
Date Prepared:	1/5/99	1/5/99	1/5/99	1/5/99
Date Analyzed:	1/5/99	1/5/99	1/5/99	1/5/99
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	10	10	10	31
LCS % Recovery:	100	100	100	103

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140
LCS	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 a 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

Ronald M. Chew
Project Manager

Sequoia Analytical

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Environmental Resolutions
74 Digital drive, Suite 6
Novato, CA 94949
Attention: Mark Dockum

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9812G34

Reported: Jan 8, 1999

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: AM

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC010299BTEX17A			
Sample No.:	GW9812G34-01			
Date Prepared:	1/2/99	1/2/99	1/2/99	1/2/99
Date Analyzed:	1/2/99	1/2/99	1/2/99	1/2/99
Instrument I.D.#:	GCH[P17	GCH[P17	GCH[P17	GCH[P17
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	10	10	11	31
% Recovery:	100	100	110	103
Matrix Spike Duplicate, ug/L:	11	11	11	33
% Recovery:	110	110	110	110
Relative % Difference:	9.5	9.5	0.0	6.6
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GC010299BTEX17A			
Date Prepared:	1/2/99	1/2/99	1/2/99	1/2/99
Date Analyzed:	1/2/99	1/2/99	1/2/99	1/2/99
Instrument I.D.#:	GCH[P17	GCH[P17	GCH[P17	GCH[P17
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	11	11	11	32
LCS % Recovery:	110	110	110	107

Percent Recovery Control Limits:

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

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

SEQUOIA ANALYTICAL

Ronald M. Chew
Project Manager

Please Note:

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

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EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

Consultant's Name: ENVIRONMENTAL RESOLUTIONS INC. Page 1 of 1

Address: 74 DIGITAL DR SUITE 6 NOVATO CA 94949		**Site Location:** 2200 E. 12TH STREET
Project #: 2293	**Consultant Project #:** 2293 13X	**Consultant Work Release #:** 19862889
Project Contact: MARK DOCKUM	**Phone #:** (415) 382 9605	**Laboratory Work Release #:**
EXXON Contact: MARLA GUENSLER	**Phone #:** (925) 246 8776	**EXXON RAS #:** 7-0238
Sampled by (print): CARL MILLICH	**Sampler's Signature:**	OAKLAND, CA
Shipment Method:	**Air Bill #:**	

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

ANALYSIS REQUIRED 9812 G34

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
MW-5-MW9F	12-22-98	1420	WATER	HCL	3	01	X			X		
MW-5-MW9G		1430				02	X			X		
MW-7-MW9H		1440				03	X			X		
MW-7-MW9D		1455				04	X			X		
MW-6-MW9A		1500				05	X			X		
MW-5-MW9B		1505				06	X			X		
MW-5-MW9I		1510				07	X			X		
MW-6-MW9C		1515				08	X			X		

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
	12-23-98	1500	Charles Armstrong Sequoia	12/28	1054	
Charles Armstrong Sequoia	12-28-98					
				12/28	1245	

Pink - Client
Yellow - Sequoia
White - Sequoia

Sequoia Analytical

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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: Mark Dockum

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

Lab Proj. ID: 9812G62

Received: 12/28/98

Reported: 01/08/99

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 4 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-BB-MW9F	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G62-01	Reported: 01/08/99

QC Batch Number: GC010299BTEX30A
Instrument ID: GCHP30

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	84

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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Environmental resolutions
74 Digital Drive, Suite 6
Novato, CA 94949
Attention: Mark Dockum

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9812G62

Reported: Jan 8, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid				
Method:	EPA 8020				
Analyst:	R.GECKLER				
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes	
QC Batch #:	GC010299BTEX30A				
Sample No.:	9812E23-1				
Date Prepared:	1/1/99	1/1/99	1/1/99	1/1/99	
Date Analyzed:	1/1/99	1/1/99	1/1/99	1/1/99	
Instrument I.D.#:	GCHP30	GCHP30	GCHP30	GCHP30	
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	
Conc. Spiked, ug/L:	10	10	10	30	
Matrix Spike, ug/L:	9.6	9.5	9.4	28	
% Recovery:	96	95	94	93	
Matrix Spike Duplicate, ug/L:	11	11	10	31	
% Recovery:	110	110	100	103	
Relative % Difference:	14	15	6.2	10	
RPD Control Limits:	0-25	0-25	0-25	0-25	

LCS Batch#:	GC010299BTEX30A			
Date Prepared:	1/2/99	1/2/99	1/2/99	1/2/99
Date Analyzed:	1/2/99	1/2/99	1/2/99	1/2/99
Instrument I.D.#:	GCHP30	GCHP30	GCHP30	GCHP30
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	10	10	10	31
LCS % Recovery:	100	100	100	103

Percent Recovery Control Limits:

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

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

SEQUOIA ANALYTICAL

Ronald M. Chew
Project Manager

Please Note:

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

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EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

Consultant's Name: ENVIRONMENTAL RESOLUTIONS INC.		Page 1 of 1
Address: 74 DIGITAL DR SUITE 6 NOVATO CA 94949		**Site Location:** 2200 E. 12TH STREET
Project #:	**Consultant Project #:** 229363X	**Consultant Work Release #:** 19802889
Project Contact: MARK DOCKUM	**Phone #:** (415) 382 9105	**Laboratory Work Release #:**
EXXON Contact: MARLA GUENSLER	**Phone #:** (925) 246 8776	**EXXON RAS #:** 7-0238
Sampled by (print): CARL MIKLICH	**Sampler's Signature:**	OAKLAND, CA
Shipment Method:	**Air Bill #:**	

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

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	ANALYSIS REQUIRED: TPH/Gas BTEX/ 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520	MTBE 8020		Temperature: ____ Inbound Seal: Yes No Outbound Seal: Yes No
98-12-G62												
X W-BB-MW9F	12-22-98	1415	WATER	HCL	1	61	X			X		
												DE 28 12

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
	12-23-98	1508	C. Grantham Sequoia	12/28	1054	
Charles Grantham Sequoia	12-28-98					

Pink - Client
Yellow - Sequoia
White - Sequoia

Sequoia Analytical

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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	Received: 12/28/98
74 Digital Drive , Suite 6		
Novato, CA 94949	Lab Proj. ID: 9812G34	Reported: 01/08/99
Attention: Mark Dockum		

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.).

Samples W-5-MW9G(9812G34-02), W-5-MW9B(9812G34-06), W-5-MW9I(9812G34-07) and W-6-MW9C(9812G34-08) were all analyzed twice to quantitate for MTBE.

SEQUOIA ANALYTICAL

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9F	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-01	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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**	**81**
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	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9G	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-02	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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**	**1100**
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	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-7-MW9H	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-03	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

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Mei Mei Shin
Project Manager

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Environmental Resolutions	Client Proj. ID: Exxon 7-0238,229313X	Sampled: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-7-MW9D	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-04	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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	95

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

SEQUOIA ANALYTICAL - ELAP #1210

lei Mei Shin
roject Manager

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Environmental Resolutions	Client Proj. ID: Exxon 7-0238,229313X	Sampled: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-6-MW9A	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-05	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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	**125**	**5200**
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	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

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Environmental Resolutions	Client Proj. ID: Exxon 7-0238,229313X	Sampled: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9B	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/05/99
Attention: Mark Dockum	Lab Number: 9812G34-06	Reported: 01/08/99

QC Batch Number: GC010599BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	700
Methyl t-Butyl Ether	500	21000
Benzene	2.5	110
Toluene	2.5	3.1
Ethyl Benzene	2.5	9.1
Xylenes (Total)	2.5	14
Chromatogram Pattern:		GAS

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

SEQUOIA ANALYTICAL - ELAP #1210

lei Mei Shin
roject Manager

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Environmental Resolutions	Client Proj. ID: Exxon 7-0238,229313X	Sampled: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-5-MW9I	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-07	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**200**
Methyl t-Butyl Ether	**1250**	**51000**
Benzene	**0.50**	**1.7**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**<C10**

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

Mei Mei Shin
Project Manager

Sequoia Analytical

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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: 12/22/98
74 Digital Drive , Suite 6	Sample Descript: W-6-MW9C	Received: 12/28/98
Novato, CA 94949	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 01/02/99
Attention: Mark Dockum	Lab Number: 9812G34-08	Reported: 01/08/99

QC Batch Number: GC010299BTEX17A
Instrument ID: GCHP17

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	**1250**	**84000**
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	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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Environmental Resolutions
74 Digital drive, Suite 6
Novato, CA 94949
Attention: Mark Dockum

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9812G34

Reported: Jan 8, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid			
Method:	EPA 8020			
Analyst:	MM			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC010599BTEX17A			
Sample No.:	GW9901101-1			
Date Prepared:	1/5/99	1/5/99	1/5/99	1/5/99
Date Analyzed:	1/5/99	1/5/99	1/5/99	1/5/99
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	9.0	9.0	9.4	28
% Recovery:	90	90	94	93
Matrix Spike Duplicate, ug/L:	9.3	9.3	9.9	28
% Recovery:	93	93	99	93
Relative % Difference:	3.3	3.3	5.2	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GC010599BTEX17A			
Date Prepared:	1/5/99	1/5/99	1/5/99	1/5/99
Date Analyzed:	1/5/99	1/5/99	1/5/99	1/5/99
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	10	10	10	31
LCS % Recovery:	100	100	100	103

Percent Recovery Control Limits:

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

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

SEQUOIA ANALYTICAL

Ronald M. Chew
Project Manager

Please Note:

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

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Environmental Resolutions
74 Digital drive, Suite 6
Novato, CA 94949
Attention: Mark Dockum

Client Project ID: Exxon 7-0238, 229313X

QC Sample Group: 9812G34

Reported: Jan 8, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid			
Method:	EPA 8020			
Analyst:	AM			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC010299BTEX17A			
Sample No.:	GW9812G34-01			
Date Prepared:	1/2/99	1/2/99	1/2/99	1/2/99
Date Analyzed:	1/2/99	1/2/99	1/2/99	1/2/99
Instrument I.D.#:	GCH(P17	GCH(P17	GCH(P17	GCH(P17
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	10	10	11	31
% Recovery:	100	100	110	103
Matrix Spike Duplicate, ug/L:	11	11	11	33
% Recovery:	110	110	110	110
Relative % Difference:	9.5	9.5	0.0	6.6
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GC010299BTEX17A			
Date Prepared:	1/2/99	1/2/99	1/2/99	1/2/99
Date Analyzed:	1/2/99	1/2/99	1/2/99	1/2/99
Instrument I.D.#:	GCH(P17	GCH(P17	GCH(P17	GCH(P17
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	11	11	11	32
LCS % Recovery:	110	110	110	107

Percent Recovery Control Limits:

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

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

SEQUOIA ANALYTICAL

Ronald M. Chew
Project Manager

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

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EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

Consultant's Name: ENVIRONMENTAL RESOLUTIONS INC.		Page 1 of 1
Address: 77 DIGITAL DR SUITE 6 NOVATO CA 94949		**Site Location:** 2200 E. 12TH STREET
Project #: 2293	**Consultant Project #:** 2293 13X	**Consultant Work Release #:** 19802889
Project Contact: MARK DOCKUM	**Phone #:** (415) 382 9105	**Laboratory Work Release #:**
EXXON Contact: MARLA BUENSLER	**Phone #:** (925) 246 8776	**EXXON RAS #:** 7-8238
Sampled by (print): CARL MILLICH	**Sampler's Signature:**	OAKLAND, CA
Shipment Method:	**Air Bill #:**	

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

ANALYSIS REQUIRED 9812 G34

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	12-22-98	1420	WATER	HCl	3	01	X			X		
W-5-MW9G		1430				02	X			X		
W-7-MW9H		1440				03	X			X		
W-7-MW9D		1455				04	X			X		
W-6-MW9A		1500				05	X			X		
W-5-MW9B		1505				06	X			X		
W-5-MW9I		1510				07	X			X		
W-6-MW9C		1515				08	X			X		

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
	12-23-98	1500	Charles Armstrong Sequoia	12/28	1054	
Charles Armstrong Sequoia	12-28-98					
				12/28	1215	

Pink - Client
Yellow - Sequoia
White - Sequoia

28 12 15