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EXXON COMPANY, U.S.A.

MARKETING DEPARTMENT•ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER
SENIOR ENGINEER

(510) 246-8776
(510) 246-8798 FAX

January 27, 1997

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

RE: Former Exxon RAS #7-0236/6630 East 14th Street, Oakland, California

Dear Mr. Klettke:

Attached for your review and comment is a report entitled ***Quarterly Groundwater Monitoring Report, Fourth Quarter 1996*** for the above referenced site. The report was prepared by Environmental Resolutions, Inc., (ERI) of Novato, California, and details the results of the fourth quarter 1996 monitoring and sampling event.

If you have any questions or comments, please contact me at (510) 246-8776.

Sincerely,

By: R.D. Hicks

Marla D. Guensler
Senior Engineer

MDG/tm

Attachment: ERI Quarterly Groundwater Monitoring Report, Fourth Quarter 1996, dated January 22, 1997.

cc: w/attachment
Mr. John Kaiser - California Regional Water Quality Control Board, San Francisco Bay Region

w/o attachment
Marc A. Briggs, ERI

ENVIRONMENTAL RESOLUTIONS, INC.

January 22, 1997
ERI 200913.R08

Ms. Marla Guensler
Exxon Company, U.S.A.
2300 Clayton Road, Suite 640
Concord, California 94520

Subject: Quarterly Groundwater Monitoring, Fourth Quarter 1996, Former Exxon Service Station 7-0236, 6630 East 14th Street, Oakland, California.

Ms. Guensler:

At the request of Exxon Company, U.S.A. (Exxon), Environmental Resolutions, Inc. (ERI) performed the fourth quarter 1996 groundwater monitoring event at the subject site (Plate 1). The purpose of quarterly monitoring is to evaluate fluctuations in dissolved hydrocarbon concentrations in groundwater and to evaluate the groundwater flow direction and gradient.

GROUNDWATER MONITORING AND SAMPLING

On December 6, 1996, ERI measured depth to water (DTW) in monitoring wells MW1 through MW7, and collected groundwater samples from wells MW2, MW3, MW5, and MW6 for laboratory analysis. No measurable liquid phase hydrocarbons were observed in the monitoring wells. ERI's groundwater sampling protocol is attached (Attachment A). ERI also measured dissolved oxygen concentrations in wells MW1 through MW4, MW6, and MW7 on October 17, November 27, and December 6, 1996.

Based on DTW measurements the groundwater appears to flow southwest with a hydraulic gradient of 0.023 (Plate 2). Historical and recent monitoring data are summarized in Table 1.

LABORATORY ANALYSES AND RESULTS

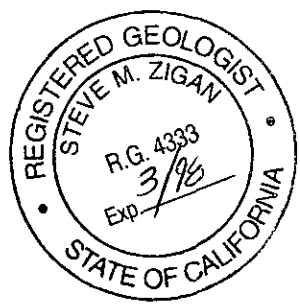
Groundwater samples were submitted to Sequoia Analytical Laboratories (California State Certification Number 1210) in Redwood City, California, under chain of custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), total petroleum hydrocarbons as gasoline (TPHg), and total extractable petroleum hydrocarbons as diesel (TEPHd) using the methods listed in the notes in Table 1. The laboratory analysis reports and chain of custody records are attached (Attachment B). Cumulative 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 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) 382-5994.

Sincerely,
Environmental Resolutions, Inc.



Glenn L. Matteucci
Senior Staff Geologist

Steve M. Zigan
R.G. 4333
H.G. 133

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 Reports and Chain of Custody Record

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ <	DTW feet	Elev. >	TEPHd <	TPHg	B	T	E	X	MTBE >	DO <ppm>
						parts per billion						
MW1												
(20.20)	3/15/91	NR	7.44	12.76	---	<50	<0.3	0.5	0.3	1.3	---	---
	01/15/92 (H,T)	NR	10.60	9.60	<300	<50	<0.5	0.7	<0.5	0.9	---	---
	03/23/92 (H,T)	NR	6.38	13.82	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	4/6/92	NR	7.55	12.65	---	---	---	---	---	---	---	---
	07/08/92 (H,T)	NR	9.85	10.35	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/13/92 (H,T)	NR	12.95	7.25	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	3/9/93	NLPH	7.38	12.82	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	6/4/93	NLPH	8.55	11.65	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/2/93	NLPH	10.85	9.35	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/16/93	NLPH	12.43	7.77	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	2/4/94	NLPH	9.10	11.10	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	4/29/94	NLPH	8.45	11.75	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/20/94	NLPH	10.73	9.47	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	12/14/94	NLPH	7.35	12.85	<50	<50	<0.5	<0.5	<0.5	<0 5	---	---
	3/27/95	NLPH	7.06	13.14	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	5/18/95	NLPH	7.32	12.88	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	8/8/95	NLPH	9.24	10.96	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	11/7/95	NLPH	10.74	9.46	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	2/29/96	NLPH	6.80	13.40	53	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	5/10/96	NLPH	8.13	12.07	150	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	8/20/96	NLPH	9.58	10.62	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	9.50
	11/27/96	---	---	---	---	---	---	---	---	---	---	11.54
	12/6/96	NLPH	8.10	12.10	---	---	---	---	---	---	---	10.05
MW2												
(19.15)	03/15/91 (H,T)	NR	9.05	10.10	120	1,700	190	2.6	12	64	---	---
	01/15/92 (H,T)	NR	11.60	7.55	1,000	6,800	81	<10	320	170	---	---
	03/23/92 (H,T)	NR	9.42	9.73	3,000	7,100	740	30	810	490	---	---
	4/6/92	NR	9.09	10.06	---	---	---	---	---	---	---	---
	7/8/92	NR	10.08	9.07	2,100	7,000	250	14	300	160	---	---
	10/13/92	NR	12.06	7.09	1,900	3,200	97	2.6	97	53	---	---
	3/9/93	sheen	9.71	9.44	---	---	---	---	---	---	---	---
	6/4/93	sheen	9.40	9.75	---	---	---	---	---	---	---	---
	09/02/93	sheen	10.46	8.69	3,700	11,000	210	18	260	59	2,500	---
	11/16/93 (M*)	NLPH	11.44	7.71	3,300	8,500	75	27	51	32	---	---
	2/4/94	NLPH	10.41	8.74	2,700	4,400	120	16	22	7 7	---	---
	4/29/94	NLPH	9.51	9.64	2,000	380	5.9	0.6	1.6	<0 5	---	---
	9/20/94	NLPH	10.57	8.58	1,800**	19,000	190	29***	110	27***	---	---

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ <	DTW feet	Elev. >	TEPHd <	TPHg	B	T	E	X	MTBE >	DO <ppm>
							parts per billion					
MW2 (cont.)	12/14/94	sheen	8.90	10.25	---	---	---	---	---	---	---	---
(19.15)	09/20/94	NLPH	10.57	8.58	1,800**	19,000	190	29***	110	27***	---	---
	12/14/94	sheen	8.90	10.25	---	---	---	---	---	---	---	---
	3/27/95	NLPH	7.72	11.43	1,700	6,300	210	15	250	43	---	---
	5/18/95	sheen	8.65	10.50	2,000#	6,000	180	9.9	220	55	---	---
	8/8/95	NLPH	9.67	9.48	2,700	5,300	110	<20	120	<20	36,000	---
	11/7/95	NLPH	10.49	8.66	1,800	6,400	120	11	95	38	24,000	---
					Additional Analyses for general minerals and properties <*							---
	2/29/96	NLPH	8.45	10.70	2,500	<5,000	120	<50	120	<50	25,000	---
	5/10/96	NLPH	9.02	10.13	2,300	11,000	210	120	210	140	26,000	---
	8/20/96	NLPH	10.08	9.07	---	---	---	---	---	---	---	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	7.75
	11/27/96	---	---	---	---	---	---	---	---	---	---	6.28
	12/6/96	NLPH	10.21	8.94	1,700	5,800	170	<25	38	<25	<125	5.21
MW3												
(19.59)	03/15/91 (H,T)	NR	7.84	11.75	160	3,100	2.2	1.9	100	84	---	---
	01/15/92 (H,T)	NR	10.30	9.29	<300	250	0.7	6.8	1.5	1.5	---	---
	03/23/92 (H,T)	NR	6.84	12.75	440	640	<0.5	12	25	6.5	---	---
	4/6/92	NR	7.84	11.75	---	---	---	---	---	---	---	---
	07/08/92 (H,T)	NR	8.63	10.96	960	2,900	<0.5	2.6	12	63.7	---	---
	10/13/92 (H)	NR	12.10	7.49	400	1,100	5.5	<0.5	4.6	1.1	---	---
	3/9/93	sheen	9.05	10.54	---	---	---	---	---	---	---	---
	6/4/93	sheen	8.43	11.16	---	---	---	---	---	---	---	---
	9/2/93	NLPH	10.22	9.37	690	840	2.7	3.6	5.4	2.9	---	---
	11/16/93	NLPH	11.44	8.15	310	650	<0.5	11	7.7	2.4	---	---
	2/4/94	NLPH	9.27	10.32	340	870	0.6	14	1.2	0.8	---	---
	4/29/94	NLPH	8.10	11.49	290	790	<0.5	<0.5	0.8	1	---	---
	9/20/94	NLPH	10.10	9.49	91**	1,900	<0.5	<0.5	11	4.4	---	---
	12/14/94	NLPH	8.00	11.59	190	1,700	17	22	<0.5	<0.5	---	---
	3/27/95	NLPH	7.23	12.36	1,100	1,500	5	3.1	6.3	3.6	---	---
	5/18/95	NLPH	7.73	11.86	470#	1,000	<0.5	<0.5	4.1	0.94	---	---
	8/8/95	NLPH	8.81	10.78	580	1,600	12	<0.5	2.4	0.63	12	---
	11/7/95	NLPH	9.96	9.63	540	1,500	<2.5	2.9	<2.5	<2.5	26	---
	2/29/96	NLPH	8.47	11.12	680	1,000	<5.0	<5.0	<5.0	<5.0	<25	---
	5/10/96	NLPH	7.93	11.66	560	480	<1.0	<1.0	<1.0	<1.0	6.8	---
	8/20/96	NLPH	10.13	9.46	---	---	---	---	---	---	---	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	7.65
	11/27/96	---	---	---	---	---	---	---	---	---	---	8.76
	12/6/96	NLPH	9.21	10.38	450	970	<1.0	<1.0	<1.0	1.8	19	10.14

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Former Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ <	DTW feet	Elev. >	TEPHd <	TPHg	B	T	E	X	MTBE >	DO <ppm>
							parts per billion					
MW4												
(19.46)	4/6/92	NR	7.76	11.70	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	7/8/92	NR	9.56	9.90	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/13/92	NR	12.09	7.37	<80	<50	<0.5	<0.5	<0.5	<0.5	--	---
	3/9/93	NLPH	7.53	11.93	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	6/4/93	NLPH	8.50	10.96	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/2/93	NLPH	10.30	9.16	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/16/93*	---	---	---	---	---	---	---	---	---	---	---
	2/4/94	NLPH	8.82	10.64	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/29/94(D)	NLPH	8.55	10.91	100	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/20/94	NLPH	10.21	9.25	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	12/14/94	NLPH	7.04	12.42	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	3/27/95	NLPH	6.38	13.08	140	<50	<0.5	<0.5	<0.5	<0.5	---	---
	5/18/95	NLPH	7.56	11.90	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	8/8/95	NLPH	8.92	10.54	<50	<50	<0.5	<0.5	<0.5	<0 5	<2.5	---
	11/7/95	NLPH	10.30	9.16	<50	<50	<0.5	<0.5	<0.5	<0 5	<2.5	---
	2/29/96	NLPH	6.44	13.02	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	5/10/96	NLPH	8.15	11.31	<50	<50	<0.5	0.84	<0.5	2.3	<2.5	---
	8/20/96	NLPH	9.27	10.19	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	1 63
	11/27/96	---	---	---	---	---	---	---	---	---	---	1.54
	12/6/96	NLPH	7.76	11.70	---	---	---	---	---	---	---	2.33
MW5												
(16.95)	04/06/92	NR	10.66	6.29	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/08/92*	---	---	---	---	---	---	---	---	---	---	---
	10/13/92	NR	15.02	1.93	<50	69	<0.5	<0.5	<0.5	<0.5	---	---
	3/9/93	NLPH	10.27	6.68	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	6/4/93	NLPH	11.35	5.60	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/2/93	NLPH	13.15	3.80	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/16/93	NLPH	14.35	2.60	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	2/4/94	NLPH	11.83	5.12	60	<50	<0.5	<0.5	<0.5	<0.5	---	---
	4/29/94	NLPH	11.15	5.80	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/20/94	NLPH	12.79	4.16	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	12/14/94	NLPH	9.95	7.00	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	3/27/95	NLPH	9.09	7.86	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	5/18/95	NLPH	10.29	6.66	<50	<50	<0.5	4.6	0.65	2.8	---	---
	8/8/95	NLPH	11.13	5.82	51	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	11/7/95	NLPH	12.12	4.83	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	Additional Analyses for general minerals and properties <**											---

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

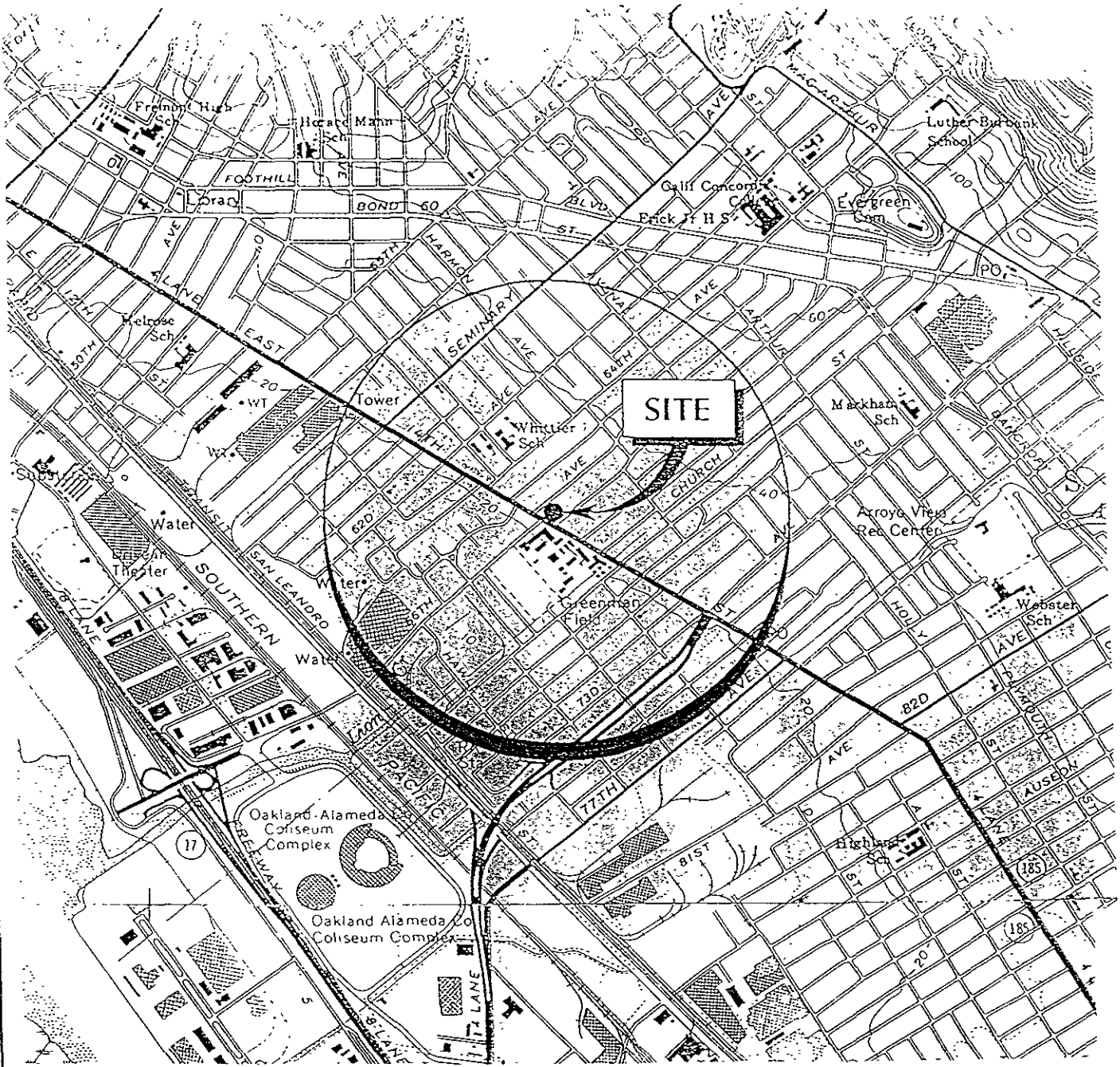
Well ID # (TOC)	Sampling Date	SUBJ <	DTW feet	Elev. >	TEPHd <	TPHg	B	T	E	X	MTBE >	DO <ppm>
							parts per billion					
MW5 (cont.)	2/29/96	NLPH	9.24	7.71	60	<50	<0.5	<0.5	<0.5	<0.5	<2 5	---
(16.95)	5/10/96	NLPH	10.71	6.24	<50	<50	<0.5	<0.5	<0.5	1.6	<2 5	---
	8/20/96	NLPH	11.45	5.50	---	---	---	---	---	---	---	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	---
	11/27/96	---	---	---	---	---	---	---	---	---	---	---
	12/6/96	NLPH	10.70	6.25	90	62	1.2	6.5	1.7	11	<2.5	---
MW6												
(18.79)	04/06/92(H)	NR	8.29	10.50	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/08/92(H,T)	NR	9.22	9.57	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/13/92	NR	11.51	7.28	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	3/9/93	NLPH	8.26	10.53	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	6/4/93	NLPH	8.90	9.89	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/2/93	NLPH	9.92	8.87	60	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/16/93	NLPH	10.65	8.14	<50	<50	<0.5	<0.5	<0 5	<0.5	---	---
	2/4/94	NLPH	9.26	9.53	80	<50	<0.5	<0.5	<0.5	<0.5	---	---
	4/29/94	NLPH	8.33	10.46	110	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/20/94	NLPH	9.23	9.56	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	12/14/94	sheen	7.87	10.92	---	---	---	---	---	---	---	---
	3/27/95	NLPH	7.63	11.16	54	56	<0.5	<0.5	<0.5	<0.50	---	---
	5/18/95	NLPH	8.00	10.79	71	56	<0.5	<0.5	<0.5	<0.5	---	---
	8/8/95	NLPH	8.92	9.87	60	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	11/7/95	NLPH	9.77	9.02	<50	<50	<0.5	<0.5	<0.5	<0.5	4.7	---
	2/29/96	NLPH	7.67	11.12	64	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	5/10/96	NLPH	8.33	10.46	110	<50	<0.5	<0.5	<0.5	<0.5	5.4	---
	8/20/96	NLPH	9.16	9.63	---	---	---	---	---	---	---	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	10.58
	11/27/96	---	---	---	---	---	---	---	---	---	---	14.17
	12/6/96	NLPH	8.55	10.24	68	<50	<0.5	<0.5	<0.5	<0.5	3.9	10.33
MW7												
(19.23)	4/6/92	NR	8.34	10.89	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	7/8/92	NR	10.30	8.93	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	10/13/92	NR	12.91	6.32	94	670	0.8	<0.5	<0.5	2.5	---	---
	03/09/93*	---	---	---	---	---	---	---	---	---	---	---
	6/4/93	NLPH	8.68	10.55	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	9/2/93	NLPH	10.80	8.43	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/16/93	NLPH	12.38	6.85	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	2/4/94	NLPH	9.28	9.95	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	4/29/94	NLPH	9.19	10.04	<50	<50	<0.5	<0.5	<0.5	<0 5	---	---
	9/20/94	NLPH	10.85	8.38	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ <	DTW feet	Elev. >	TEPHd <	TPHg	B	T	E	X	MTBE >	DO <ppm>
						parts per billion						
MW7 (cont.)												
(19.23)	12/14/94	NLPH	8.44	10.79	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	3/27/95	NLPH	7.54	11.69	280	<50	<0.5	<0.5	<0.5	<0.5	---	---
	5/18/95	NLPH	8.11	11.12	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---
	8/8/95	NLPH	9.48	9.75	52	<50	<0.5	<0.5	<0.5	<0.5	<2 5	---
	11/17/95	NLPH	10.83	8.40	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	2/29/96	NLPH	7.70	11.53	<50	<50	<0.5	<0.5	<0.5	<0 5	<2.5	---
	5/10/96	NLPH	8.76	10.47	<50	<50	<0.5	<0.5	<0.5	2.1	<2.5	---
	8/20/96	NLPH	9.91	9.32	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---
	10/17/96	---	---	---	---	---	---	---	---	---	---	1.48
	11/27/96	---	---	---	---	---	---	---	---	---	---	2.71
	12/6/96	NLPH	8.90	10.33	---	---	---	---	---	---	---	8 90

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-0236
6630 East 14th Street
Oakland, California

Notes:		
NLPH	=	Liquid phase hydrocarbons not present in well
TOC	=	Elevation of top of well casing; relative to mean sea level (MSL) in feet
SUBJ	=	Results of subjective evaluation,
sheen	=	Liquid phase hydrocarbons present as a sheen
NR	=	Not recorded
DTW	=	Depth to water
Elev.	=	Elevation of groundwater; relative to mean sea level
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using modified EPA method 5030/8015
TEPHd	=	Total extractable petroleum hydrocarbons as diesel analyzed using modified EPA method 5030/8015
BTEX	=	Benzene, toluene, ethylbenzene, total xylene isomers analyzed using EPA method 5030/8020
MTBE	=	Methyl tert-butyl ether analyzed using EPA method 5030/8020
DO	=	Dissolved oxygen
<	=	Less than the laboratory detection limit
	=	Not sampled/Not measured
*	=	Well not accessible : well obstructed / wellhead cover damaged / well paved over
**	=	Lighter hydrocarbons contribute to diesel range quantitation
***	=	Results obtained past technical holding time (10/08/94) due to dilution requirements
C	=	High boiling point hydrocarbons are present in sample.
D	=	Sample pattern does not match diesel standard pattern.
H	=	EPA Method 8010 compounds not detected at or above their respective laboratory detection limits Exceptions: MW-2, 03/15/91, Methylene chloride detected at 1 ppb MW-3, 03/15/91, Methylene chloride detected at 21 ppb
M*	=	A compound suspected to be Methyl tert-butyl ether was present
T	=	Total Oil and Grease (TOG) using EPA Method 5520 not detected at or above the laboratory detection limit of 5,000 ppb.
<*	=	Less than stated laboratory detection limits except 490 ppm bicarbonate, 37 ppm calcium, 31 ppm chloride, 390 ppm hardness, 790 ppb iron, 60 ppm magnesium, 4,700 ppb manganese, 1.1 ppm sodium, 61 ppm sulfate, 540 ppm TDS, 730 umhos/cm conductivity, pH = 6.9
<**	=	Less than stated laboratory detection limits except 200 ppm bicarbonate, 23 ppm calcium, 21 ppm chloride, 78 ppb copper, 190 ppm hardness, 49,000 ppb iron, 44 ppm magnesium, 4,200 ppb manganese, 3.9 ppm potassium, 52 ppm sodium, 60 ppm sulfate, 390 ppm TDS
---	=	Not sampled
ppm	=	Parts per million



20090001

N

APPROXIMATE SCALE

0 1/2 1

MILE

Source: U.S.G.S. 7.5 minute topographic quadrangle map Oakland East and San Leandro, Calif. 1980

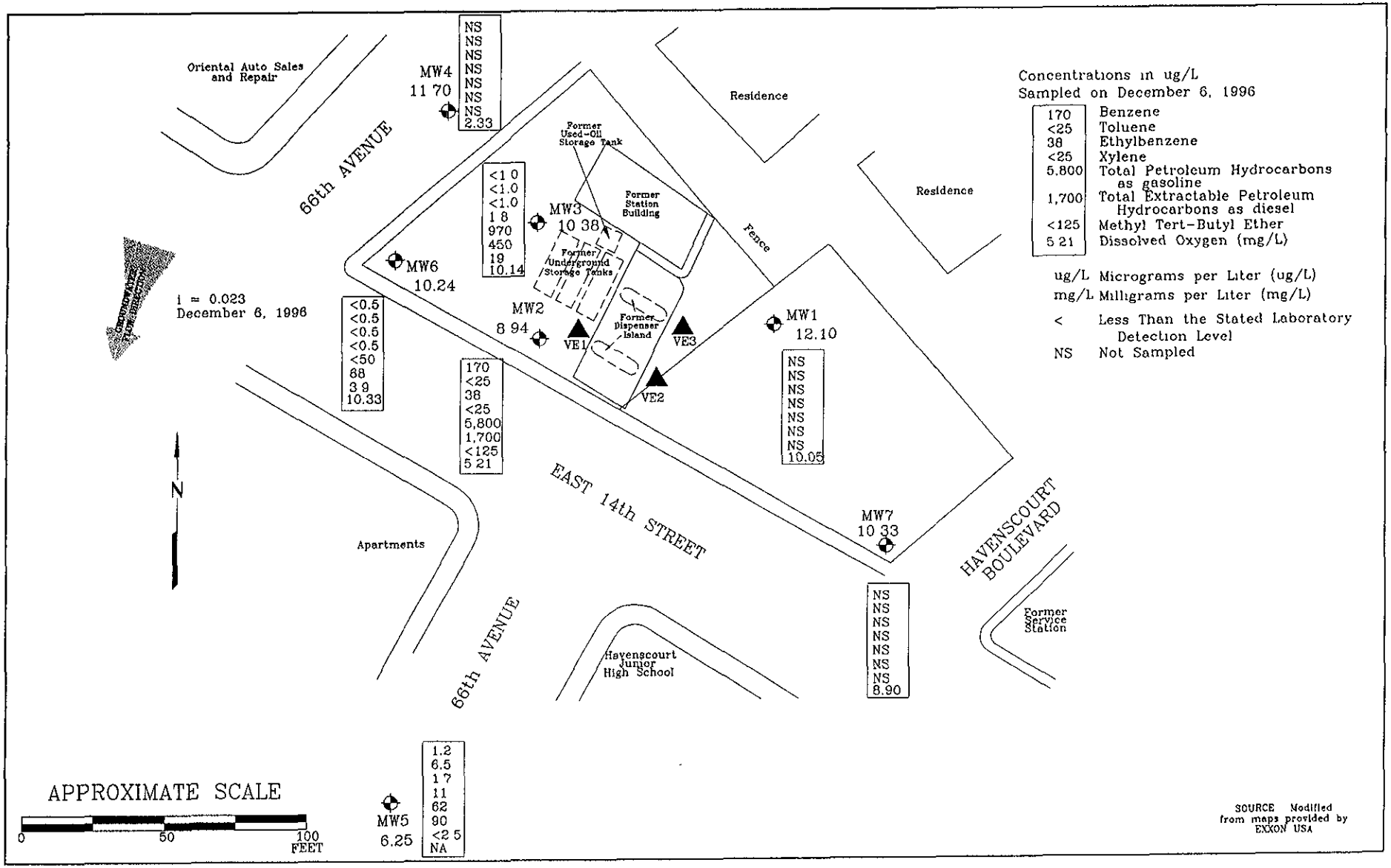
ENVIRONMENTAL RESOURCES, INC.

PROJECT ERI 2009

SITE VICINITY MAP

FORMER EXXON SERVICE STATION 7-0236
6630 East 14th Street
Oakland, California

PLATE 1



FN 20090002

ERI ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

FORMER
EXXON SERVICE STATION 7-0236
6630 East 14th Street
Oakland, California

EXPLANATION

- Groundwater Monitoring Well
- MW7 10 33 Groundwater Elevation
- VE3 Vapor Extraction Well
- i Interpreted Groundwater Gradient

PROJECT NO.
2009

PLATE
2

DATE 12/22/96

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 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 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 3 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 = $r^2h(7.48)$ 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

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® 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 REPORTS
AND CHAIN OF CUSTODY RECORD

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

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

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-10-MW5
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9612419-01

Sampled: 12/06/96
Received: 12/06/96
Extracted: 12/10/96
Analyzed: 12/13/96
Reported: 12/17/96

QC Batch Number: GC1210960HBPEXZ
Instrument ID: GCHP19A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	90
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	68

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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Environmental Resolutions
74 Digital Drive , Suite 6
Novato, CA 94949

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-10-MW5
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612418-01

Sampled: 12/06/96
Received: 12/06/96

Analyzed: 12/10/96
Reported: 12/17/96

QC Batch Number: GC121096BTEX21A
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	62
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	1.2
Toluene	0.50	6.5
Ethyl Benzene	0.50	1.7
Xylenes (Total)	0.50	11
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

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680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

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

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-9-MW6
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9612419-02

Sampled: 12/06/96
Received: 12/06/96
Extracted: 12/10/96
Analyzed: 12/12/96
Reported: 12/17/96

QC Batch Number: GC1210960HBPEXZ
Instrument ID: GCHP19A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	68
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	112

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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Environmental Resolutions
74 Digital Drive , Suite 6
Novato, CA 94949

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-9-MW6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612419-02

Sampled: 12/06/96
Received: 12/06/96

Analyzed: 12/10/96
Reported: 12/17/96

QC Batch Number: GC121096BTEX02A
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**	**3.9**
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	116

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-9-MW3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9612419-03

Sampled: 12/06/96
Received: 12/06/96
Extracted: 12/10/96
Analyzed: 12/12/96
Reported: 12/17/96

QC Batch Number: GC1210960HBPEXZ
Instrument ID: GCHP19A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	450
Chromatogram Pattern: **Unidentified HC**		C8-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	108

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

Sequoia Analytical

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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

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

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-9-MW3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612419-03

Sampled: 12/06/96
Received: 12/06/96

Analyzed: 12/10/96
Reported: 12/17/96

QC Batch Number: GC121096BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**100**	**970**
Methyl t-Butyl Ether	**5.0**	**19**
Benzene	1.0	N.D.
Toluene	1.0	N.D.
Ethyl Benzene	1.0	N.D.
Xylenes (Total)	**1.0**	**1.8**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	135 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

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680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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Environmental Resolutions
74 Digital Drive , Suite 6
Novato, CA 94949

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-10-MW2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9612419-04

Sampled: 12/06/96
Received: 12/06/96
Extracted: 12/10/96
Analyzed: 12/13/96
Reported: 12/17/96

QC Batch Number: GC1210960HBPEXZ
Instrument ID: GCHP19A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	1700
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	128

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 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

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

Attention: Marc Briggs

Client Proj. ID: Exxon 7-0236, 200913X
Sample Descript: W-10-MW2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9612419-04

Sampled: 12/06/96
Received: 12/06/96

Analyzed: 12/10/96
Reported: 12/17/96

QC Batch Number: GC121096BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**2500**	**5800**
Methyl t-Butyl Ether	125	N.D.
Benzene	**25**	**170**
Toluene	25	N.D.
Ethyl Benzene	**25**	**38**
Xylenes (Total)	25	N.D.
Chromatogram Pattern:		
Unidentified HC		C6-C12

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

Kevin Follett
Project Manager

[redacted]

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

9612419

Consultant's Name: ERI		**Page** 1 **of** 1	
Address: 74 Digital Dr Suite 6 Novato Ca 94949		**Site Location:** 6630 E 14th St	
Project #: 7-0236	**Consultant Project #:** 200913X	**Consultant Work Release #:** 19432502	
Project Contact: Marc Briggs	**Phone #:** 415 382 9105	**Laboratory Work Release #:**	
EXXON Contact: Marla Guensler	**Phone #:** 510 246 8776	**EXXON RAS #:** 7-0236	
Sampled by (print): Scott Graham	**Sampler's Signature:** Scott Graham	Oakland, Ca	
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		Temperature: ______ Inbound Seal: Yes No Outbound Seal: Yes No
W-10-MW5	12/6/96	13:35	Water	HCl Ice	3	1	X			X		
W9-MW6		13:50				2	X			X		
W-9-MW3		1405				3	X			X		
W-10-MW2		14:20				4	X			X		
W-10-MW5		1340		Ice	2	1		X				
W-9-MW6		1355				2		X				
W-~~10~~9-MW3		1410				3		X				
~~W-10-MW6~~ W-10-MW2 (MF 12/6/96)		14:25				4		X				

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Scott Graham			Graycolo 248			
			JD Cardonas / Sequoia	12/6/96	1800	