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
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#136

JUN 8 1999

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

RE: Former Exxon RAS #7-3006/720 High Street, Oakland, California.

Dear Mr. Chan:

Attached for your review and comment is a report entitled ***Quarterly Groundwater Monitoring and Remediation Status Report, First Quarter 1999***, dated May 6, 1999, for the above referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details the results of groundwater monitoring and sampling and remedial 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 and Remediation Status Report, First Quarter 1999, dated May 6, 1999.

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

w/o attachment
Mr. Peter A. Petro - Environmental Resolutions, Inc.

99 JUN 10 PM 3:11
ENVIRONMENTAL PROTECTION

ENVIRONMENTAL RESOLUTIONS, INC.

May 6, 1999
ERI 201011.R19

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

Subject: Quarterly Groundwater Monitoring and Remediation Status Report, First Quarter 1999, Former Exxon Service Station 7-3006, 720 High Street, Oakland, California.

Ms. Guensler:

At the request of Exxon Company, U.S.A. (Exxon), Environmental Resolutions, Inc. (ERI) performed remedial activities and groundwater monitoring for the first quarter 1999 at the subject site. The location of the site is shown on the Site Vicinity Map (Plate 1). The purpose of ongoing remedial activities is to remove residual hydrocarbons from soil and dissolved hydrocarbons from groundwater. The purpose of quarterly monitoring is to evaluate concentrations of dissolved hydrocarbons in groundwater and the effectiveness of remedial actions. The location of selected site features are shown on the Generalized Site Plan (Plate 2).

GROUNDWATER MONITORING AND SAMPLING

On March 24, 1999, ERI measured the depth to water (DTW) and collected groundwater samples from selected wells for laboratory analysis. Work was performed in accordance with ERI's groundwater sampling protocol (Attachment A).

Due to ongoing air sparge/soil vapor extraction (AS/SVE) remediation activities, groundwater elevations and gradient may not be indicative of actual conditions. Therefore, a hydraulic gradient and flow direction have not been calculated.

Laboratory Analyses and Results

Groundwater samples were submitted to Sequoia Analytical Laboratories, Inc. (California State Certification Number 1210) in Redwood City, California, under Chain of Custody protocol. The samples were analyzed for total purgeable petroleum hydrocarbons as gasoline (TPPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and total extractable petroleum hydrocarbons as diesel (TEPHd). The specific methods of analysis are listed in the notes in Table 1. The results of analyses are presented in Table 1 and are shown on Plate 2. The laboratory analysis reports and Chain of Custody records are attached (Attachment B).

SOIL AND GROUNDWATER REMEDIATION

Air Sparging/Soil Vapor Extraction

ERI initiated operation of the AS/SVE system in August 1996, utilizing the thermal/catalytic oxidizer. Cumulative operational and performance data are presented in Table 2. Copies of the laboratory analysis reports and Chain of Custody records for soil vapor extraction system samples collected during the reporting period are attached (Attachment B).

The AS/SVE system currently consists of six AS wells for air injection and six vadose wells for SVE within an on-site interceptor trench, a water knock-out tank, a Thermtech VAC-25 thermal/catalytic oxidizer, a Gast air compressor, and a propane tank for supplemental fuel. The AS/SVE system is operated in a continuous mode within the trench.

Groundwater Extraction and Treatment

The groundwater remediation system (GRS) is designed to treat separate-phase and dissolved hydrocarbons in groundwater extracted from the interceptor trench beneath the site. Pneumatic pumps are installed in extraction wells RW2 and RW5 to recover groundwater from the interceptor trench. Subsurface and above-ground collection piping are used to transfer extracted groundwater to a holding tank. A transfer pump and polyvinyl chloride (PVC) piping are used to direct the water stream from the holding tank through water filters, an air stripper, and subsequently through liquid-phase granular activated carbon (GAC) canisters connected in series. The treated groundwater is discharged to the sanitary sewer regulated by East Bay Municipal Utilities District (EBMUD).

estimate of amt of PHC removed?

The GRS flow rates, total volume extracted, and influent, intermediate, and effluent sample concentrations are presented in Table 3.

SUMMARY AND STATUS OF INVESTIGATION

Based on data collected to date, it appears the AS/SVE system is removing residual hydrocarbons in soil and dissolved hydrocarbons in groundwater. The estimated amount of hydrocarbons removed by the system was performed according to ERI's standard operation procedures (SOP-25 "Hydrocarbons Removed from a Vadose Well") included in Attachment C. ERI will continue to operate the remedial systems, monitor, and sample groundwater at the site during the second quarter 1999.

The table below presents the estimated amounts of hydrocarbons removed by the AS/SVE system since the last reporting period and since startup.

Period	Pounds of Hydrocarbons Removed	Gallons of Hydrocarbons Removed
11/04/98 - 04/16/99	91	15
To Date:	5,132	843

past 5 mos. 15 gals

The GRS was not operational during the first quarter 1999. Based on data collected to date, ERI estimates that the GRS has removed the following amounts of hydrocarbons at the subject site.

Period	Pounds of Hydrocarbons Removed	Gallons of Hydrocarbons Removed
01/06/99 – 04/16/99	0	0
To Date:	10	2

... considering not operating in future

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.

ERI recommends forwarding copies of this report to:

Mr. Stephen Hill
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

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

If you have any questions or comments regarding this report, please call Mr. Peter A. Petro at (415) 382-5995.

Sincerely,
Environmental Resolutions, Inc.

Peter A. Petro
Assistant Project Manager

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

4P7-99

Attachments:

Table 1:	Cumulative Groundwater Monitoring and Sampling Data
Table 2:	Cumulative Hydrocarbon Removal and Emissions for Soil Vapor Extraction System
Table 3:	Operation and Performance Data for Groundwater Remediation System
Plate 1:	Site Vicinity Map
Plate 2:	Generalized Site Plan
Attachment A:	Groundwater Sampling Protocol
Attachment B:	Laboratory Analysis Reports and Chain of Custody Records
Attachment C:	ERI SOP-25 "Hydrocarbons Removed from a Vadose Well"

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

Well ID #	Sampling	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
(TOC)	Date	<	feet	>	<				ug/l					>
MW1	1/20/94	NLPH	9.25	3.62	—	—	—	—	—	—	—	—	—	—
(12.87)	02/02-03/94	NLPH	8.60	4.27	70	<50	—	<0.5	<0.5	<0.5	0.7	—	—	—
	3/10/94	NLPH	8.31	4.56	—	—	—	—	—	—	—	—	—	—
	4/22/94	NLPH	7.95	4.92	—	—	—	—	—	—	—	—	—	—
	05/10-11/94	NLPH	7.48	5.39	100	<50	—	<0.5	<0.5	<0.5	1.6	—	—	—
	6/27/94	NLPH	7.65	5.22	—	—	—	—	—	—	—	—	—	—
	8/31/94	NLPH	9.39	3.48	—	—	—	—	—	—	—	—	—	—
	9/29/94	NLPH	9.83	3.04	<50	<50	—	<0.5	<0.5	<0.5	<0.5	—	—	—
	10/25/94	NLPH	10.19	2.68	—	<50	<50	<0.5	<0.5	<0.5	<0.5	—	—	—
	11/30/94	NLPH	8.97	3.90	—	—	—	—	—	—	—	—	—	—
	12/27/94	NLPH	7.44	5.43	—	—	—	—	—	—	—	—	—	—
	2/6/95	NLPH	5.71	7.16	—	<50	100	0.52	<0.5	<0.5	<0.5	—	—	—
	6/7/95	NLPH	7.62	5.25	81	<50	3.5	<0.5	<0.5	<0.5	<0.5	—	—	—
	9/18/95	NLPH	10.02	2.85	82	<50	6	<0.5	<0.5	<0.5	<0.5	—	—	—
	11/1/95	NLPH	10.74	2.13	160	<50	8.9	<0.5	<0.5	<0.5	<0.5	—	—	—
	2/14/96	NLPH	7.81	5.06	100	<50	7.8	<0.5	<0.5	<0.5	<0.5	—	—	—
	6/19/96	NLPH	7.47	5.40	93	<50	7.1	<0.5	<0.5	<0.5	<0.5	—	<50	—
	9/24/96	NLPH	10.42	2.45	83	<50	9.5	<0.5	<0.5	<0.5	<0.5	—	—	—
	12/11/96	NLPH	8.50	4.37	81	<50	7.2	<0.5	<0.5	<0.5	<0.5	—	—	—
	3/19/97	NLPH	9.14	3.73	78	<50	6.4	<0.5	<0.5	<0.5	<0.5	—	—	—
	6/4/97	NLPH	9.82	3.05	58	<50	6.0	<0.5	<0.5	<0.5	<0.5	—	—	—
	9/2/97	NLPH	10.26	2.61	150	<50	5.4	<0.5	<0.5	<0.5	<0.5	—	—	—
	12/2/97	NLPH	9.32	3.55	88	<50	5.1	<0.5	<0.5	<0.5	<0.5	—	—	—
	3/24/98	NLPH	6.44	6.43	58	<50	5.6	<0.5	<0.5	<0.5	<0.5	—	—	—
	6/23/98	NLPH	9.23	3.64	84	<50	3.8	<0.5	<0.5	<0.5	<0.5	—	—	—
	9/29/98	NLPH	9.91	2.96	61	<50	2.6	<0.5	<0.5	<0.5	<0.5	—	—	—
	12/30/98	NLPH	9.21	3.66	80	<50	4.1	<0.5	<0.5	<0.5	<0.5	—	—	—
	3/24/99	**NLPH**	**5.53**	**7.34**	**64.3**	**<50**	**4.95**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**—**	**—**	**—**
MW2	1/20/94	— [NR]	—	—	—	—	—	—	—	—	—	—	—	—
(12.98)	02/02-03/94	— [NR]	—	—	—	—	—	—	—	—	—	—	—	—
	3/10/94	[8 c.]	6.96	6.02	—	—	—	—	—	—	—	—	—	—
	4/22/94	[10 c.]	—	—	—	—	—	—	—	—	—	—	—	—
	05/10-11/94	[5 c.]	—	—	—	—	—	—	—	—	—	—	—	—
	6/27/94	Sheen	7.10	5.88	—	—	—	—	—	—	—	—	—	—
	8/31/94	Sheen	8.58	4.40	—	—	—	—	—	—	—	—	—	—
	9/29/94	Sheen	9.11	3.87	—	—	—	—	—	—	—	—	—	—
	10/25/94	Sheen	7.76	5.22	—	—	—	—	—	—	—	—	—	—
	11/30/94	—	7.33	5.65	—	—	—	—	—	—	—	—	—	—
	12/27/94	Sheen	6.77	6.21	—	—	—	—	—	—	—	—	—	—
	2/6/95	Sheen	5.00	7.98	—	—	—	—	—	—	—	—	—	—

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
		<	feet	>	<				ug/l					>
MW2 (cont.)	6/7/95	Sheen	7.14	5.84	---	---	---	---	---	---	---	---	---	---
(12.98)	9/18/95	Sheen	10.82	2.16	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	11.65	1.33	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	8.39	4.59	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	6.55	6.43	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	11.56	1.42	---	---	---	---	---	---	---	---	---	---
	12/11/96	Sheen	8.02	4.96	---	---	---	---	---	---	---	---	---	---
	3/19/97	Sheen	8.63	4.35	---	---	---	---	---	---	---	---	---	---
	6/4/97	Sheen	10.57	2.41	---	---	---	---	---	---	---	---	---	---
	9/2/97	Sheen	11.51	1.47	---	---	---	---	---	---	---	---	---	---
	12/2/97	NLPH	11.24	1.74	820	1,400	57	15	2.8	8.6	<2.5	---	---	---
	3/27/98	NLPH	6.06	6.92	2,000	7,400	<50	1,400	350	490	1,500	---	---	---
	6/23/98	Sheen	11.06	1.92	2,900	180	9.5	3.2	0.55	0.92	1.3	---	---	---
	9/29/98	NLPH	10.51	2.47	180	290	9.3	<0.50	0.65	1.5	1.5	---	---	---
	12/30/98	NLPH	9.83	3.15	700	520	16	17	0.96	2.6	3.5	---	---	---
	3/24/99	**NLPH**	**4.47**	**8.51**	**1,440**	**14,000**	**<40**	**1,300**	**336**	**786**	**3,420**	**---**	**---**	**---**
MW3	1/20/94	Sheen	8.24	4.68	---	---	---	---	---	---	---	---	---	---
(12.92)	02/02-03/94	Sheen	7.68	5.24	---	---	---	---	---	---	---	---	---	---
	3/10/94	Sheen	7.24	5.68	---	---	---	---	---	---	---	---	---	---
	4/22/94	Sheen	6.79	6.13	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	Sheen	6.43	6.49	---	---	---	---	---	---	---	---	---	---
	6/27/94	0.01 [NR]	6.97	5.95	---	---	---	---	---	---	---	---	---	---
	8/31/94	Sheen	8.41	4.51	---	---	---	---	---	---	---	---	---	---
	9/29/94	Sheen	8.97	3.95	---	---	---	---	---	---	---	---	---	---
	10/25/94	Sheen	9.43	3.49	---	---	---	---	---	---	---	---	---	---
	11/28/94	---	7.19	5.73	---	---	---	---	---	---	---	---	---	---
	12/27/94	Sheen	6.64	6.28	---	---	---	---	---	---	---	---	---	---
	2/6/95	Sheen	4.87	8.05	---	---	---	---	---	---	---	---	---	---
	6/7/95	Sheen	7.05	5.87	---	---	---	---	---	---	---	---	---	---
	9/18/95	Sheen	10.61	2.31	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	11.58	1.34	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	8.34	4.58	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	6.35	6.57	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	11.45	1.47	---	---	---	---	---	---	---	---	---	---
	12/11/96	NLPH	7.89	5.03	17,000*	4,800	30	340	<5.0	8.2	20	---	---	---
	3/19/97	NLPH	9.83	3.09	3,000	1,900	80	160	11	5.6	10	---	---	---
	6/4/97	NLPH	10.43	2.49	8,000	920	11	15	2.8	2.4	<2.0	---	---	---
	9/2/97	Sheen	12.45	0.47	---	---	---	---	---	---	---	---	---	---
	12/2/97	NLPH	11.21	1.71	6,700	920	21	10	2.1	<1.0	2.7	---	---	---
	3/24/98	NLPH	5.93	6.99	4,600	1,500	25	5,500	<5.0	<5.0	<5.0	---	---	---

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

Well ID # (TOC)	Sampling Date	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
		<	feet	>	<				ug/l					>
MW3 (cont.)	6/23/98	NLPH	11.13	1.79	39,000	1,300	9.4	53	<1.0	<1.0	<1.0	—	—	—
(12.92)	9/29/98	Sheen	10.46	2.46	2,600	540	<5.0	6.8	1.9	1.4	2.3	—	—	—
	12/30/98	NLPH	9.72	3.20	11,000	4,000	<50	74	<10	<10	<10	—	—	—
	3/24/99	**Sheen**	**4.36**	**8.56**	**3,850**	**2,330**	**<20**	**<5.0**	**<5.0**	**<5.0**	**<5.0**	—	—	—
MW4	1/20/94	— [NR]	—	—	—	—	—	—	—	—	—	—	—	—
(12.77)	02/02-03/94	— [1 c.]	—	—	—	—	—	—	—	—	—	—	—	—
	3/10/94	[8 c.]	7.12	5.65	—	—	—	—	—	—	—	—	—	—
	4/22/94	[10 c.]	—	—	—	—	—	—	—	—	—	—	—	—
	05/10-11/94	[5 c.]	—	—	—	—	—	—	—	—	—	—	—	—
	6/27/94	0.01 [NR]	6.50	6.27	—	—	—	—	—	—	—	—	—	—
	8/31/94	0.02 [NR]	7.84	4.93	—	—	—	—	—	—	—	—	—	—
	9/29/94	0.03 [NR]	8.43	4.34	—	—	—	—	—	—	—	—	—	—
	10/25/94	Sheen	9.24	3.53	—	—	—	—	—	—	—	—	—	—
	11/30/94	—	6.77	6.00	—	—	—	—	—	—	—	—	—	—
	12/27/94	Sheen	6.14	6.63	—	—	—	—	—	—	—	—	—	—
	2/6/95	Sheen	4.87	7.90	—	—	—	—	—	—	—	—	—	—
	6/7/95	Sheen	6.91	5.86	—	—	—	—	—	—	—	—	—	—
	9/18/95	Sheen	9.59	3.18	—	—	—	—	—	—	—	—	—	—
	11/1/95	Sheen	11.52	1.25	—	—	—	—	—	—	—	—	—	—
	2/14/96	Sheen	8.56	4.21	—	—	—	—	—	—	—	—	—	—
	6/19/96	Sheen	6.09	6.68	—	—	—	—	—	—	—	—	—	—
	9/24/96	Sheen	10.20	2.57	—	—	—	—	—	—	—	—	—	—
	12/11/96	Sheen	7.78	4.99	—	—	—	—	—	—	—	—	—	—
	3/19/97	Sheen	8.56	4.21	—	—	—	—	—	—	—	—	—	—
	6/4/97	Sheen	9.31	3.46	—	—	—	—	—	—	—	—	—	—
	9/2/97	Sheen	10.00	2.77	—	—	—	—	—	—	—	—	—	—
	12/2/97	NLPH	8.72	4.05	15,000	1,500	50	<2.5	9.7	3.0	10	—	—	—
	3/24/98	NLPH	5.79	6.98	6,400	540	38	<0.5	4.4	1.6	5.4	—	—	—
	6/23/98	Sheen	8.50	4.27	7,500	1,000	25	3.3	<2.0	<2.0	<2.0	—	—	—
	9/29/98	Sheen	9.77	3.00	65,000	7,300	<50	<10	<10	<10	<10	—	—	—
	12/30/98	Sheen	8.54	4.23	12,000	1,000	170	3.8	5.1	<2.5	4.1	—	—	—
	3/24/99	**Sheen**	**4.41**	**8.36**	**20,500**	**1,300**	**4.40**	**2.64**	**<1.0**	**<1.0**	**<1.0**	—	—	—
MW5	7/18/89	Well Destroyed												

TABLE 2
CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
SOIL VAPOR EXTRACTION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

DATE	SAMPLE ID	TEMP deg F	PRESS in H2O	AIR FLOW cu ft/min	HC Inf ppmv	HC Eff ppmv	HC Inf Conc* mg/cu M	LB HC for Period	LB HC Cumulative	Benzene Inf Conc* mg/cu M	LB Benzene per Period	LB Benzene Cumulative	LB Benzene Emitted per Day
3/26/97				211.2	35	1	148						
4/2/97	A-INF			220			170	94.55	3,343.3	4.0	< 1.020	< 44.59	
	A-EFF						< 10			< 0.10			< 0.0020
4/9/97				220	40	1	169						
4/16/97				220	58	3	245						
4/23/97				220	30	1	127						
4/30/97				220	30	2	127						
5/8/97	A-INF			193.6			340	170.41	3,513.7	4.8	2.940	< 47.53	
	A-EFF						< 10			< 0.10			< 0.0017
5/14/97				193.6	80	1	339						
5/21/97				193.6	20	1	85						
5/28/97				176	42	0	178						
6/4/97	A-INF			176			360	156.76	3,670.4	2.9	1.724	< 49.26	
	A-EFF						< 10			< 0.10			< 0.0016
6/11/97				176	40	0	169						
6/18/97				158.4	38	0	161						
6/25/97				167.2	36	0	152						
7/2/97	A-INF			167.2			350	153.11	3,823.5	5.4	1.790	< 51.04	
	A-EFF						< 10			< 0.10			< 0.0015
7/9/97				202.4	29.4	0	124						
7/18/97				246.4	14.7	0	62						
7/22/97				246.4	54.2	0	229						
7/30/97				220	36.1	0	153						
8/7/97	A-INF			220			160	159.53	3,983.1	< 0.50	< 1.846	< 52.89	
	A-EFF						13			< 0.10			< 0.0020
8/11/97				220	19.1	0	81						
8/20/97				167.2	13.1	0	55						
8/27/97				158.4	20.0	0	85						
9/3/97	A-INF			158.4			400	128.39	4,111.5	< 1.0	< 0.344	< 53.23	
	A-EFF						< 10			< 0.10			< 0.0014
9/10/97				123.2	800	4.0	3386						
9/17/97				158.4	131	1.1	554						
9/24/97				176	40	0	169						
10/8/97	A-INF			176			200	157.59	4,269.1	3.1	1.077	< 54.31	
	A-EFF						< 10			< 0.10			< 0.0016
10/15/97				193.6	50	0.9	212						
10/22/97				176	50	1.5	212						
10/30/97				158.4	30	0	127						
11/5/97				167.2	65	7.6	275						
11/12/97	A-INF			176			880	298.58	4,567.6	< 0.10	< 0.885	< 55.20	
	A-EFF						< 10			< 0.10			< 0.0016
11/20/97				158.4	33	3.2	138						
11/25/97				123.2	56	3.0	237						
12/3/97	A-INF			220			NA			NA	NA	NA	
	A-EFF						< 10			< 0.10			< 0.0020
12/10/97				176	19	0.5	80						
12/17/97				193.6	16	0.6	68						
12/23/97				193.6	13	0.0	55						
12/29/97	A-INF			176			51	345.64	4,913.3	< 0.10	< 0.074	< 55.27	
	A-EFF						< 10			< 0.10			< 0.0016
1/6/98	A-INF			176			70	7.65	4,920.9	2.1	< 0.139	< 55.41	
	A-EFF						< 10			< 0.1			< 0.0016
1/13/98				211.2	6	1.0	25						
1/20/98				184.8	4	1.3	17						
2/3/98	System down due to chart recorder problem												
2/10/98	Restart system												
2/10/98	A-INF			132			< 10	< 15.48	< 4,936.4	1.1	0.619	< 56.03	
	A-EFF						< 10			< 0.1			< 0.0012

TABLE 2
CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
SOIL VAPOR EXTRACTION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

DATE	SAMPLE ID	TEMP deg F	PRESS in H2O	AIR FLOW cu ft/min	HC Inf ppmv	HC Eff ppmv	HC Inf Conc* mg/cu M	LB HC for Period	LB HC Cumulative	Benzene Inf Conc* mg/cu M	LB Benzene per Period	LB Benzene Cumulative	LB Benzene Emitted per Day
2/18/98				132.15	0.5	0.0							
2/23/98				158.4	0.6	0.1							
3/11/98	A-INF			193.6			< 10	< 4.24	< 4,940.6	1.5	0.551	< 56.58	
	A-EFF						< 10			< 0.1			< 0.0017
3/17/98				167.2	1.6	3.4							
3/20/98	System down due to control fault												
3/23/98	Restart system												
3/23/98				176	6.2	1.9							
3/30/98				167.2	0.4	0.8							
4/7/98				176	1.4	1.1							
4/17/98				123.2	1.4	1.7							
4/21/98	A-INF			88			10	< 5.18	< 4,945.8	0.26	0.456	< 57.04	
	A-EFF						< 10			< 0.1			< 0.0008
4/28/98				88	2.3	1.6							
5/12/98	A-INF			88			< 10	< 1.66	< 4,947.5	< 0.1	< 0.032	< 57.07	
	A-EFF						< 10			< 0.1			< 0.0008
5/19/98				88	1.8	1.2							
5/28/98				88	1.7	1.2							
6/2/98	A-INF			88	4.3	2.1	18	< 2.32	< 4,949.8	< 0.1	< 0.017	< 57.08	
	A-EFF						< 10			< 0.1			< 0.0008
6/9/98				88	1.9	1.1							
6/17/98				96.8	1.7	0.9							
6/24/98				96.8	2.1	0.8							
7/8/98	A-INF			96.8	3.4	0.8	< 10	< 4.18	< 4,954.0	< 0.1	< 0.030	< 57.11	
	A-EFF						< 10			< 0.1			< 0.0009
7/14/98	A-INF			132	3.1	0.0	39	< 1.51	< 4,955.5	0.91	< 0.031	< 57.15	
	A-EFF						< 10			< 0.1			< 0.0012
7/14/98	Shut down vapor extraction system upon departure. One process blower not operating												
7/16/98	System Inspection, vapor extraction system still down.												
7/21/98	System down on arrival due to blown process blower fuse. Restarted system												
7/21/98				46.2	2.5	1.1							
7/27/98	System operated for 11 hours prior to samples being collected.												
7/27/98	A-INF			176	0.3	0.1	13	< 0.16	< 4,955.7	< 0.10	< 0.003	< 57.15	
	A-EFF						< 10			< 0.10			< 0.0016
8/5/98	System down on arrival due to cumbustion blower problems. System ran for one hour. Restarted system												
8/5/98	A-INF			184.8	4.1	0.0	90	0.02	< 4,955.7	2.50	< 0.001	< 57.15	
	A-EFF						< 10			< 0.1			< 0.0017
8/11/98	A-INF			193.6	2.7	0.3							
8/18/98	A-INF			202.4	3.1	0.3							
8/25/98				193.6	1.8	0.3							
9/3/98	System down upon arrival due to propane tank running empty. System operated for 16 days. Restarted system.												
9/3/98	A-INF			184.8	4.4	0.2	68	20.97	< 4,976.6	1.00	0.464	< 57.61	
	A-EFF						< 10			< 0.10			< 0.0017
9/8/98				202.4	1.8	0.2							
9/22/98	System down upon arrival due to low gas pressure control fault. Restarted system down 14 days												
9/22/98					2.7	0.3							
9/29/98				176	20.4	1.8							
10/6/98	A-INF			202.4	13.0	1.3	56	20.38	< 4,997.0	1.70	0.444	< 58.06	
	A-EFF						< 10			< 0.10			0.0018
	System down upon arrival due to propane tank running empty.System down for 115.5 hours.												
10/15/98				191.84	1.1	0.2							
10/20/98				193.6	78.6	0.3							
10/27/98				193.6	219.0	6.2							
11/4/98	A-INF			193.6	42.1	3.3	150	44.30	< 5,041.3	5.00	1.727	< 59.78	
	A-EFF						< 10			< 0.10			0.0017
11/12/98				184.8	32.4	3.7							

TABLE 2
CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
SOIL VAPOR EXTRACTION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

DATE	SAMPLE ID	TEMP deg F	PRESS in H2O	AIR FLOW cu ft/min	HC Inf ppmv	HC Eff ppmv	HC Inf Conc* mg/cu M	LB HC for Period	LB HC Cumulative	Benzene Inf Conc* mg/cu M	LB Benzene per Period	LB Benzene Cumulative	LB Benzene Emitted per Day
11/17/98				180.4	97.4	7.5							
11/17/98	System down upon arrival due to propane tank running empty.System down for 82 hours.												
12/2/98	System down upon arrival due to propane tank running empty. System down on departure.												
12/9/98	Restarted system												
12/9/98	A-INF			184.8	10.0	0.6	Bag flat						
	A-EFF						< 10			< 0.10			
12/16/98				184.8	8.5	0.0							
12/23/98	System down upon arrival due to propane tank running empty. System remained down												
1/6/99	Restarted system												
1/6/99	A-INF			281.6	61.6	2.8	63	< 47.70	< 5,089.0	0.15	< 1.153	< 60.94	
	A-EFF						< 10			< 0.1			< 0.0025
1/12/99	A-INF			264	2.8	0.0							
	A-EFF												
1/18/99	A-INF			220	100.8	6.4							
	A-EFF												
1/26/99	A-INF			184.8	32.0	5.6							
	A-EFF												
2/4/99	A-INF			176	12.5	6.7	< 50	< 33.65	< 5,122.7	< 0.5	< 0.076	< 61.01	
	A-EFF						< 50			< 0.5			< 0.0079
2/12/99	A-INF			132	15.2	0.8							
	A-EFF												
2/12/99	System down on departure, compound full with rain water.												
3/18/99	Pumped containment rain water into storage tank, restarted system.												
3/18/99	A-INF			246.4	16.2	0	< 10	< 4.55	< 5,127.2	< 0.5	< 0.076	< 61.09	
	A-EFF						< 10			< 0.5			< 0.0111
3/30/99	A-INF			132	11.5	0							
	A-EFF												
4/9/99	A-INF			154	2.4	0							
	A-EFF												
4/16/99	A-INF			140.8	0	0.9	< 10	< 5.04	< 5,132.3	< 0.1	< 0.151	< 61.24	
	A-EFF						< 10			< 0.1			< 0.0013
4/21/99	A-INF			123.2	5.5	0							
	A-EFF												
4/28/99	A-INF			132	10.1	0							
	A-EFF												

Notes:

A-INF	= Air Influent	HC	= Hydrocarbons measured as total purgeable petroleum hydrocarbons as gasoline analyized using EPA method 8015 (modified)
A-INT	= Air Intermediate	ug/l	= micrograms per liter
A-EFF	= Air Effluent	mg/cuM	= milligrams per cubic meter
NA	= Not Analyzed	lb	= pounds
cu. ft/min	= cubic feet per minute	acfm	= actual cubic feet per minute
ppmv	= parts per million by volume	<	= less than the laboratory method detection limit

*If value is below laboratory detection limit, detection limit value is used.
*Values calculated using ERI SOP-25 "Hydrocarbons Removed from a Vadose Well" (Attachment C)

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
1/9/95	0		W-INF	3400	630	190	100	460	NA				
	--	--	W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
	--	--	W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0076				
1/10/95	--	--	--										
1/11/95	795	398	--	--	--	--	--	--	--	--			
1/13/95	1,065	135	System shut down pending EBMUD arsenic revision (discharge limit of 0.0012 ppm)										
1/23/95	1,065	0	--	--	--	--	--	--	--				
2/13/95	1,065	0	--	--	--	--	--	--	--				
2/14/95	1,065	0	--	--	--	--	--	--	--				
2/17/95	1,065	0	--	--	--	--	--	--	--				
2/27/95	1,065	0	--	--	--	--	--	--	--				
3/7/95	1,065	0	EBMUD arsenic revision (discharge limit of 0.05 ppm)										
3/13/95	10,800	1,623	W-INF	110	7.4	0.5	0.53	6	NA	0.1581	0.1581	0.0287	0.0287
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	<0.005				
3/21/95	11,660	108	W-INF	<50	4.5	<0.5	<0.5	5.5	NA	0.0006	0.1587	0.0000	0.0288
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0059				
	System shut down - 55-gallon liquid phase carbon canister (leak)												
3/30/95	11,760	11	Replaced one 55-gallon liquid phase carbon canister (leak)										
4/4/95	11,760		Replaced one 55-gallon liquid phase carbon canister (leak) - Started system										
4/4/95	12,660	180	W-INF	220	66	11	4.8	16	NA	0.0011	0.1598	0.0003	0.0291
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0096				
4/12/95	53,200	5,068	W-INF	770	110	19	<5.0	160	NA	0.1674	0.3273	0.0298	0.0588
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	<0.005				

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
4/19/95	73,710	2,930	W-INF	400	47	5.4	<0.5	40	NA	0.1001	0.4274	0.0134	0.0723
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0055				
4/26/95	82,820	1,301	W-INF	1500	190	44	12	150	NA	0.0722	0.4996	0.0090	0.0813
			W-INT	200	31	3.2	<0.5	15	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.008				
5/9/95	83,750	72	Replaced two 55-gallon liquid phase carbon canisters (leaks)										
5/26/95	97,840	829	W-INF	680	210	16	5.8	28	NA	0.1366	0.6362	0.0251	0.1063
			W-INT	<50	0.94	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
6/6/95	Added two 55-gallon liquid phase carbon canisters in series												
6/6/95	Replaced one 55-gallon liquid phase carbon canister (leak)												
6/8/95			W-INF	2800	660	300	54	340	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
6/27/95	125,010	849	W-INF1	4500	1700	99	35	220	NA	0.5871	1.2233	0.2165	0.3228
			W-INF2	810	420	20	7.9	58	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	0.53	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/10/95	131,370	489	Replaced two 55-gallon liquid phase carbon canisters										
7/11/95	131,690	320	W-INF1	1600	530	15	<10	59	NA	0.1700	1.3933	0.0621	0.3850
			W-INF2	630	270	7.0	<5.0	25	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.041				

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
			Additional Analyses: ND Purgeable Volatile Organics, ND Priority Pollutant Metals, except for 12 ppb nickel and 8.0 ppb zinc										
7/25/95	141,550	704	System down pending results of air samples										
7/28/95	System Down - Could not Restart												
7/31/95	Restart System												
8/15/95	System Down - Remove hydrocarbon vapor detector and send to manufacturer for calibration												
9/11/95	Replaced hydrocarbon vapor detector - Restarted System												
9/13/95	System Down - hydrocarbon vapor detector shut down												
9/18/95	Restart System												
9/18/95	148,550	244	W-INF1	1900	590	33	16	120	NA	0.2462	1.6395	0.0788	0.4637
			W-INF2	490	150	7.6	3.1	30	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/20/95	System Down - hydrocarbon vapor detector shut down												
9/25/95	Restart System												
9/28/95	System Down - hydrocarbon vapor detector shut down												
10/13/95	151,380	113	W-INF1	4900	1400	310	120	480	NA	0.0803	1.7197	0.0235	0.4872
			W-INF2	780	230	49	15	72	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0079				
			Additional Analyses: ND Purgeable Volatile Organics										
10/26/95	154,143	213											
11/6/95	157,906	342											
11/20/95	159,664	126	W-INF1	630	140	<5.0	6.9	22	NA	0.1911	1.9108	0.0532	0.5404
			W-INF2	230	36	1.6	2.2	7.6	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
11/27/95	System Down												

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
11/29/95	160,361	77	Restart System										
12/4/95	161,442	216											
12/18/95	168,304	490	W-INF1	8900	1100	240	130	2200	NA	0.3435	2.2543	0.0447	0.5851
			W-INF2	3900	380	85	60	890	NA				
			W-INT	<50	1.3	<0.5	<0.5	5.1	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
1/2/96	171,770	231											
1/8/96	173,707	323											
1/16/96	178,573	608	W-INF	490	53	1.8	3.9	35	NA	0.4023	2.6566	0.0494	0.6345
			W-INF2	150	8.1	<0.5	0.61	6.8	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
1/30/96	190,030	818											
2/14/96	202,610	839	W-INF1	840	220	25	<2.5	36	NA	0.1334	2.7900	0.0274	0.6619
			W-INF2	410	96	10	1.1	23	NA				
			W-INT	<50	0.58	1.8	<0.5	2.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
2/27/96	216,100	1,038											
3/12/96	System down upon arrival												
3/12/96	216,590	35	W-INF1	1700	410	110	26	130	NA	0.1481	2.9381	0.0367	0.6986
			W-INF2	420	94	24	5.9	33	NA				
			W-INT	<50	0.53	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
3/25/96	217,460	67	W-INF1	100	6.6	<0.5	<0.5	7	NA	0.0065	2.9446	0.0015	0.7002
			W-INF2	<50	3.9	<0.5	<0.5	1.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
3/25/96	System shutdown, removal of blower/carbon to thermal oxidizer												
7/22/96	Start-up remediation system												

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
7/22/96	219,802	20	W-INF1	3100	330	53	180	630	NA	0.0313	2.9759	0.0033	0.7034
			W-INF2	2500	330	41	140	480	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
8/1/96	System down on arrival, unable to obtain emission flow rate and samples. Notified BAAQMD												
8/1/96	247,305	2,750											
8/9/96			W-INF1	1500	550	6.0	12	69	NA				
			W-INF2	240	71	0.91	1.3	9.2	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
8/15/96	252,600	378											
8/29/96	256,508	279											
9/6/96	258,828	290	W-INF1	<50	<0.5	<0.5	<0.5	<0.5	NA	0.5128	3.4887	0.0538	0.7573
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/20/96	260,063	88											
9/24/96	262,422	590											
10/3/96	263,150	81											
10/14/96	263,232	7	System down, air compressor, unable to obtain samples. Notified EBMUD										
1/2/97	263,232		Replaced compressor, restarted unit										
1/31/97	290,045	925	W-INF	5,500	1,700	580	120	740	NA	0.6208	4.1095	0.1902	0.9475
			W-INT1	190	39	12	2.1	13	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
2/6/97	313,800	3,959	W-INF1	5,100	910	160	45	910	NA	1.0504	5.1600	0.2586	1.2061
			W-INT2	570	62	12	2.9	86	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
2/14/97	323,820	1,253											
2/18/97	327,856	1,009											
2/28/97	335,480	762											
3/5/97	340,178	940	W-INF1	980	100	5.0	2.1	54	NA	0.6690	5.8290	0.1111	1.3172
			W-INF2	<50	0.81	<0.5	<0.5	<0.5	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
3/12/97	344,977	686											
3/19/97	346,176	171											
3/26/97	346,927	107											
4/2/97	351,729	686	W-INF	430	120	1.8	5.3	19	NA	0.0679	5.8969	0.0106	1.3278
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
4/9/97	356,009	611											
4/16/97	358,700	384											
4/23/97	System down on arrival												
4/30/97	361,241	182											
5/8/97	365,440	525											
5/14/97	368,270	472	System down, bad float on air stripper										
5/21/97	370,444	311	W-INF	1,300	360	<5.0	16	21	NA	0.1351	6.0320	0.0375	1.3653
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
	System down, bad float on air stripper												
5/28/97	372,219	254	System down, bad float on air stripper										
6/4/97			Replaced float, restarted system										
6/4/97	375,230	430	W-INF1	1,600	510	5.8	17	16	NA	0.0579	6.0899	0.0174	1.3827
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
6/11/97	378,550	474	System down, faulty transfer pump										
7/22/97	Restarted system												
7/22/97	379,120	14	W-INF1	1,300	520	6.2	6.2	34	NA	0.0466	6.1365	0.0165	1.3992
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/29/97	379,315	28											
8/7/97	385,510	688	W-INF1	1,400	400	13	21	52	NA	0.0720	6.2085	0.0245	1.4238
			W-INF2	<50	2.0	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
8/13/97	388,390	480											
8/20/97	391,380	427											
8/27/97	393,545	309											
9/3/97	395,744	314											
9/10/97	397,402	237	W-INF1	<50	<0.5	<0.5	<0.5	<0.5	NA	0.0719	6.2804	0.0199	1.4436
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/17/97	399,232	261											
9/24/97	400,746	216											
10/8/97	403,527	199	W-INF1	<50	0.53	<0.5	<0.5	<0.5	NA	0.0026	6.2829	0.00003	1.4437
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
10/15/97	403,935	58											
10/22/97	406,161	318											
10/30/97	407,795	204											
11/5/97	408,668	146											

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
11/12/97	410,116	207											
11/20/97	413,391	409											
11/25/97	415,500	422											
12/2/97	421,667	881	W-INF1	660	180	10	8.2	13	NA	0.0537	6.3367	0.0137	1.4573
			W-INF2	410	110	5.3	5.3	8.9	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
12/3/97	422,595	928											
12/10/97	429,205	944											
12/17/97	436,179	996											
12/23/97	441,533	892											
12/29/97	445,796	711											
1/6/98	System down,high water. Restarted system												
1/6/98	449,395	450	W-INF1	1,600	640	25	<10	36	NA	0.2614	6.5981	0.0949	1.5522
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
1/13/98	455,054	808											
1/20/98	463,576	1,217											

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
										TPHg Removed		Benzene Removed	
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg [ug/l]	B [ug/l]	T [ug/l]	E [ug/l]	X [ug/l]	Arsenic [mg/l]	Per Period [lb]	Cumulative [lb]	Per Period [lb]	Cumulative [lb]
2/3/98	478,169	1,042	W-INF1	1,800	780	66	40	580	NA	0.4081	7.0062	0.1705	1.7226
			W-INF2	530	180	12	6.4	110	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
2/10/98	481,638	496											
2/18/98	497,659	2,003											
2/23/98	499,350	338											
3/11/98	System down,high water. Restarted system												
3/11/98	542,708	2,710	W-INF1	2,000	670	24	9.6	220	NA	1.0231	8.0293	0.3904	2.1130
			W-INF2	130	2.6	0.65	<0.5	4.3	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
3/23/98	System down due to solinoid												
4/7/98	Replaced solinoid and restarted system												
4/7/98	547,022	160	W-INF1	2,100	380	65	76	350	NA	0.0738	8.1031	0.0756	2.1886
			W-INF2	130	2.6	0.65	<0.5	4.3	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
4/17/98	583,780	3,676											
4/21/98	585,720	485											
4/28/98	598,920	1,886											
5/5/98	606,610	1,099	W-INF1	2,300	380	27	26	390	NA	1.0938	9.1968	0.1889	2.3775
			W-INF2	130	2.6	0.65	<0.5	4.3	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
5/12/98	613,920	1,044											
5/19/98	621,120	1,029											
5/28/98	628,580	829											
6/2/98	634,760	1,236	Samples were collected but inadvertantly not analyzed by the laboratory.										

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
6/9/98	635,740	140											
6/17/98	642,810	884											
6/24/98	645,760	421											
7/8/98	645,800	3											
7/14/98	649,980	697	W-INF1	2700	480	<25	92	270	NA	0.9046	10.1015	0.1556	2.5331
			W-INF2	NS	NS	NS	NS	NS	NS				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/14/98	649,980	System down on departure											
7/16/98	System run manually for the East Bay Municipal Utility District Inspection, effluent split samples taken. System still down.												
7/16/98			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/21/98	650,180	29											
7/27/98	655,260	847											
7/27/98	System shutdown until propane can be refilled to restart the Thermtech Vac 25.												
8/5/98	Restarted system												
8/5/98	655,260	0	W-INF1	510	240	4.7	3.5	27	NA	0.0707	10.1722	0.0159	2.5490
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
8/11/98	657,650	398											
8/18/98	662,740	727											
8/25/98	665,330	370											
9/3/98	System was down upon arrival due to low propane. System was restarted.												
9/3/98	667,700	263	W-INF1	400	110	<2.5	<2.5	9.4	NA	0.0472	10.2194	0.0182	2.5671
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/8/98	System down upon arrival due to a failed sump pump. System was restarted.												
9/8/98	669,720	404											

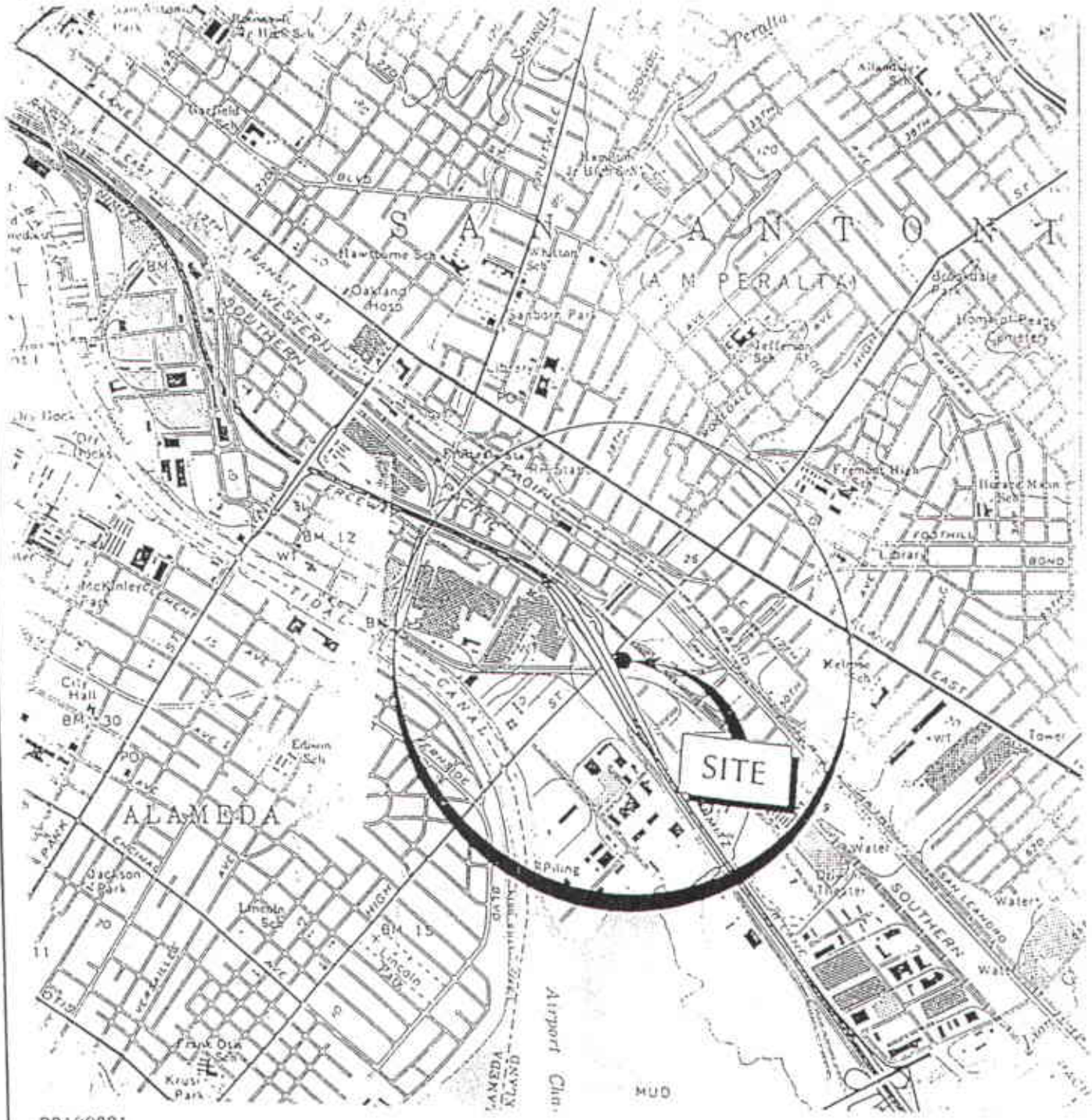
TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
										TPHg Removed		Benzene Removed	
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg [ug/l]	B [ug/l]	T [ug/l]	E [ug/l]	X [ug/l]	Arsenic [mg/l]	Per Period [lb]	Cumulative [lb]	Per Period [lb]	Cumulative [lb]
9/22/98	673,870	296											
9/29/98	673,940	10											
10/6/98	676,292	336	W-INF1	990	300	<5.0	7.2	24	NA	0.0498	10.2692	0.0147	2.5818
			W-INF2	<50	0.6	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
10/15/98	679,330	336	System down until carbon change out.										
10/20/98	679,330	0	System down until carbon change out.										
10/27/98	679,520		W-INF1	1600	510	<10	10	62	NA	0.0349	10.3041	0.0109	2.5927
			W-INF2	<50	4.6	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.19				
11/4/98	682,780	407	System shutdown on departure due to problems with the feed pump.										
11/12/98	682,810		System restarted upon departure of site.										
11/17/98			Fix problem with float in water stripper. System restarted on departure.										
11/24/98			System running on departure.										
11/24/98	687,980	430	W-INF1	420	100	3.8	2.7	3.3	NA	0.0713	10.3754	0.0215	2.6143
			W-INF2	78	3.3	8.6	<0.5	0.51	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
11/25/98			Inspection by EBMUD.										
11/25/98	688,262	646	W-EFF	<50	<.50	<.50	<.50	<.50	NA				
12/2/98	689,150	52	System down upon arrival. System restarted on departure.										
12/9/98	695,800		W-INF1	1500	480	19	49	120	NA	0.0626	10.4380	0.0189	2.6332
			W-INF2	310	95	3.1	3.9	32	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
12/16/98	695,800		System down upon arrival. System restarted on departure.										
12/23/98	702,994		System down on departure, pending a permit renewal from EBMUD.										

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California

				Analytical Data									
	Total	Average	Sample							TPHg Removed		Benzene Removed	
Date	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
1/6/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
1/12/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
1/18/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
1/26/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
2/4/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
2/12/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
3/18/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
3/30/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
4/9/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
4/16/99	702,994		System down on departure, pending a permit renewal from EBMUD.										

W-INF1	= water influent before stripper or before tank	B	= Benzene	NA	= Not applicable
W-INF2	= water influent after stripper or after filters	T	= Toluene	NS	= Not sampled
W-INT	= water intermediate samples	E	= Ethylbenzene		
W-EFF	= water effluent samples	X	= Total Xylenes		
TPPHg	= Total purgeable petroleum hydrocarbons as gasoline	<	= less than the laboratory method detection limit as indicated		
gpd	= gallons per day	ug/L	= micrograms per liter		
gal	= gallons	mg/L	= milligrams per liter		



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APPROXIMATE SCALE

0 1/2 1

MILE

Source: U.S.G.S. 7.5 minute topographic quadrangle map Oakland/San Leandro, California Photorevised 1980

ENVIRONMENTAL RESOLUTIONS, INC.

PROJECT ERI 2010

SITE VICINITY MAP

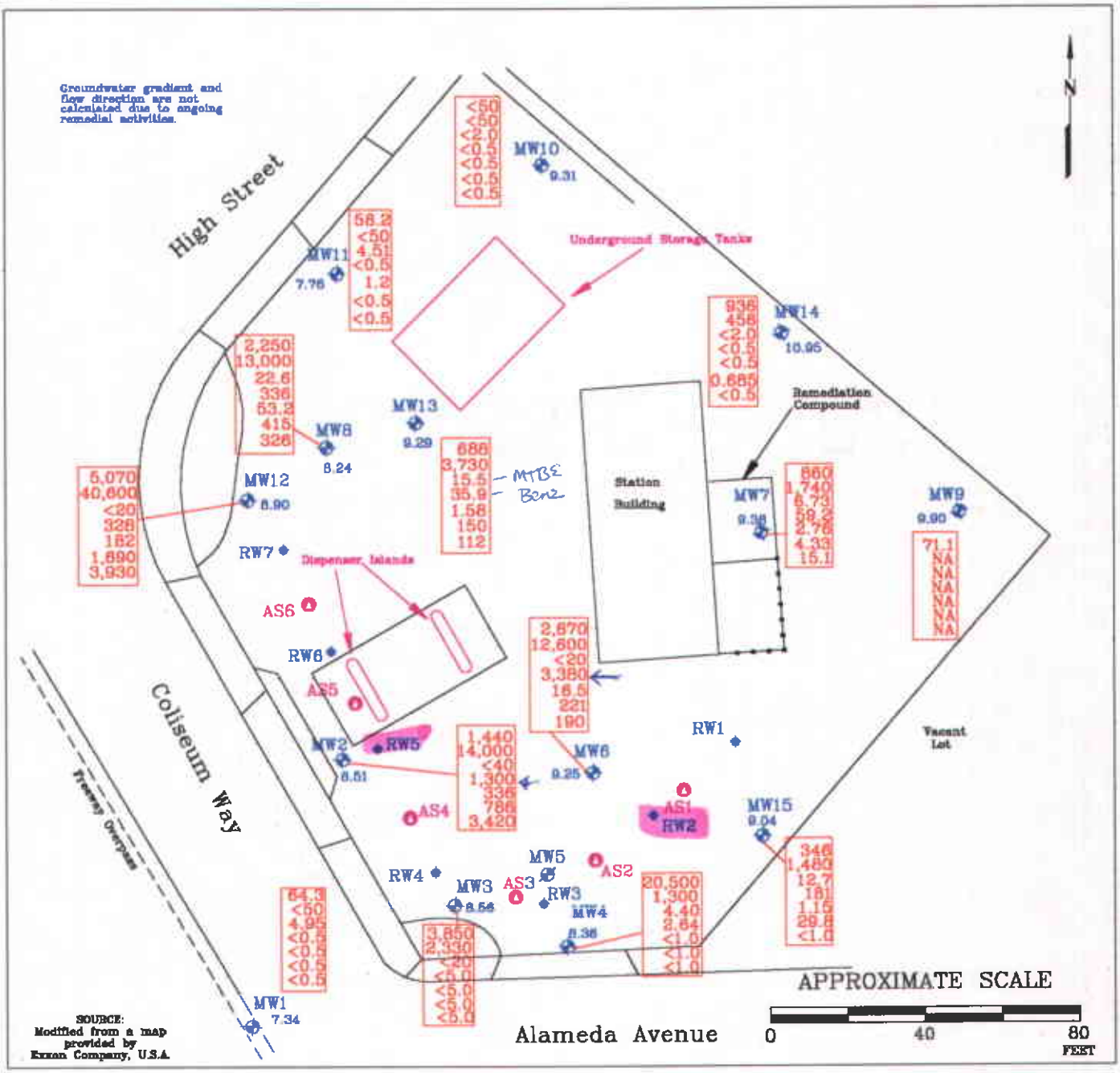
FORMER EXXON SERVICE STATION 7-3006

720 High Street

Oakland, California

PLATE

1



FN 20100002

EXPLANATION

- MW15 — Groundwater Monitoring Well
- 9.04 — Groundwater Elevation in feet above mean sea level
- MW5 — Groundwater Monitoring Well (Destroyed)
- RW7 — Recovery Monitoring Well
- AS6 — Air-Sparging/Vapor-Extraction Well

Groundwater Concentrations in ug/L
Sampled March 24, 1999

- 5,070 Total Extractable Petroleum Hydrocarbons as diesel
- 40,6000 Total Purgeable Petroleum Hydrocarbons as gasoline
- <20 Methyl Tertiary Butyl Ether
- 328 Benzene
- 182 Toluene
- 1,690 Ethylbenzene
- 3,930 Total Xylenes
- < Less Than the Stated Laboratory Detection Limit
- ug/L Micrograms per Liter
- NA Not Analyzed

ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

FORMER EXXON SERVICE STATION 7-3006
720 High Street
Oakland, California

PROJECT NO. 2010

PLATE 2

April 30, 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 flow direction and gradient, depth to water (DTW) levels are subtracted from wellhead elevations.

Water 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 were checked for measurable separate-phase hydrocarbon product or sheen. Any separate-phase product is 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 are 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:

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

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

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

After purging, each well was allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover to at least 80% (due to slow recharging of the well) between purging and sampling are considered to be "grab samples". Water samples were collected with a new, disposable Teflon® bailer, and were 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 RECORDS

Sequoia
Analytical

1455 McDowell Blvd. North, Ste. D
Petaluma, CA 94954
(707) 792-1865
FAX (707) 792-0342

April 26, 1999

Peter Petro
ERI
73 Digital Dr. Suite 6
Novato, CA 94949

RE: Exxon/P904039

Dear Peter Petro:

Enclosed are the results of analyses for sample(s) received by the laboratory on March 25, 1999. Please note that sample W-10-MW9 was not analyzed for TPH Gas and BTEX . The 40 ml VOA containers for this sample were received broken at Sequoia Redwood City. ERI was contacted and we were instructed to cancel the analysis.
If you have any questions concerning this report, please feel free to contact me.
Sincerely,

Matt Sakai
Project Manager

CA ELAP Certificate Number 2245

Sequoia Analytical

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Petaluma, CA 94954
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FAX (707) 792-0342

igital Dr. Suite 6	Project:	Exxon	Sampled: 3/24/99
ovato, CA 94949	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
	Project Manager:	Peter Petro	Reported: 4/26/99

ANALYTICAL REPORT FOR P904039

ple Description	Laboratory Sample Number	Sample Matrix	Date Sampled
-5-MW10	P904039-01	Water	3/24/99
10-MW9	P904039-02	Water	3/24/99
-7-MW11	P904039-03	Water	3/24/99
6-MW1	P904039-04	Water	3/24/99
8-MW14	P904039-05	Water	3/24/99
-4-MW2	P904039-06	Water	3/24/99
5-MW15	P904039-07	Water	3/24/99
-8-MW4	P904039-08	Water	3/24/99
5-MW7	P904039-09	Water	3/24/99
-4-MW3	P904039-10	Water	3/24/99
4-MW13	P904039-11	Water	3/24/99
-14-MW6	P904039-12	Water	3/24/99
-5-MW8	P904039-13	Water	3/24/99
-3-MW12	P904039-14	Water	3/24/99
TB	P904039-15	Water	3/24/99
-BB-MW10	P904039-16	Water	3/24/99

Sequoia Analytical

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RI	Project:	Exxon	Sampled: 3/24/99
73 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Sample Description: W-5-MW10
Laboratory Sample Number: P904039-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
			Sequoia Analytical - Petaluma					
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9040082	4/5/99	4/5/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*94.0*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*98.7*	"	
Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
Diesel	9040157	4/7/99	4/14/99		0.0500	ND	mg/l	
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*60.8*	%	

Sequoia Analytical

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I	Project:	Exxon	Sampled: 3/24/99
73 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Sample Description: W-10-MW9
Laboratory Sample Number: P904039-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
Diesel	9040157	4/7/99	4/14/99		0.0500	0.0711	mg/l	3
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*79.2*	%	

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3 Digital Dr. Suite 6	Project:	Exxon	Sampled: 3/24/99
ato, CA 94949	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: W-7-MW11
aboratory Sample Number: P904039-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
asoline	9040082	4/5/99	4/5/99		50.0	ND	ug/l	
nzene	"	"	"		0.500	ND	"	
uene	"	"	"		0.500	1.20	"	
thylbenzene	"	"	"		0.500	ND	"	
lenes (total)	"	"	"		0.500	ND	"	
thyl tert-butyl ether	"	"	"		2.00	4.51	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*92.3*	%	
urrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*96.3*	"	
tal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/14/99		0.0500	0.0582	mg/l	3
rrogate: o-Terphenyl	"	"	"	*50.0-150*		*64.2*	%	

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ERI	Project:	Exxon	Sampled: 3/24/99
73 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Sample Description: W-6-MW1
Laboratory Sample Number: P904039-04

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9040082	4/5/99	4/5/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	**4.95**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*95.0*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*105*	*"*	
Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
Diesel	9040157	4/7/99	4/14/99		0.0500	**0.0643**	mg/l	3
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*82.7*	*%*	

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RI	Project:	Exxon	Sampled: 3/24/99
73 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: **W-8-MW14**
Laboratory Sample Number: **P904039-05**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
				Sequoia Analytical - Petaluma				
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9040082	4/5/99	4/5/99		50.0	**456**	ug/l	
enzene	"	"	"		0.500	ND	"	
oluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	**0.685**	"	
Xylenes (total)	"	"	"		0.500	ND	"	
ethyl tert-butyl ether	"	"	"		2.00	ND	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*87.7*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*108*	"	
otal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
Diesel	9040157	4/7/99	4/14/99		0.0500	**0.936**	mg/l	3
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*60.0*	%	

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RI	Project:	Exxon	Sampled: 3/24/99
73 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Sample Description: W-4-MW2
Laboratory Sample Number: P904039-06

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9040082	4/5/99	4/5/99		1000	**14000**	ug/l	
Benzene	"	"	"		10.0	**1300**	"	
Toluene	"	"	"		10.0	**336**	"	
Ethylbenzene	"	"	"		10.0	**786**	"	
Xylenes (total)	"	"	"		10.0	**3420**	"	
Methyl tert-butyl ether	"	"	"		40.0	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*95.0*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*102*	"	
Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
Diesel	9040157	4/7/99	4/14/99		0.0500	**1.44**	mg/l	4
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*62.0*	%	

**Refer to end of report for text of notes and definitions.*

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RI	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: W-5-MW15
aboratory Sample Number: P904039-07

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
asoline	9040080	4/5/99	4/5/99		100	**1480**	ug/l	
Benzene	"	"	"		1.00	**181**	"	
oluene	"	"	"		1.00	**1.15**	"	
thylbenzene	"	"	"		1.00	**29.8**	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Methyl tert-butyl ether	"	"	"		4.00	**12.7**	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*97.7*	%	
urrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*103*	"	
otal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/14/99		0.0500	**0.346**	mg/l	4
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*69.2*	%	

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RI	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

mple Description: **W-8-MW4**
aboratory Sample Number: **P904039-08**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
tal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
soline	9040080	4/5/99	4/5/99		100	**1300**	ug/l	1
Benzene	"	"	"		1.00	**2.64**	"	
luene	"	"	"		1.00	ND	"	
hylbenzene	"	"	"		1.00	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Methyl tert-butyl ether	"	"	"		4.00	**4.40**	"	
rrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*100*	%	
rrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*105*	"	
tal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
esel	9040157	4/7/99	4/15/99		1.25	20.5	mg/l	
urrogate: o-Terphenyl	"	"	"	*50.0-150*		*110*	%	

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RI	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: W-5-MW7
aboratory Sample Number: P904039-09

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
asoline	9040080	4/5/99	4/5/99		50.0	**1740**	ug/l	
Benzene	"	"	"		0.500	**59.2**	"	
oluene	"	"	"		0.500	**2.76**	"	
thylbenzene	"	"	"		0.500	**4.33**	"	
Xylenes (total)	"	"	"		0.500	**15.1**	"	
Methyl tert-butyl ether	"	"	"		2.00	**6.73**	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*97.0*	%	
urrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*112*	"	
otal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/14/99		0.0500	**0.860**	mg/l	4
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*82.0*	%	

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RI	Project:	Exxon	Sampled: 3/24/99
3 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: W-4-MW3
aboratory Sample Number: P904039-10

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
				Sequoia Analytical - Petaluma				
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
asoline	9040081	4/5/99	4/5/99		500	**2330**	ug/l	
Benzene	"	"	"		5.00	**609**	"	
oluene	"	"	"		5.00	ND	"	
thylbenzene	"	"	"		5.00	ND	"	
Xylenes (total)	"	"	"		5.00	ND	"	
Methyl tert-butyl ether	"	"	"		20.0	ND	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*95.0*	%	
urrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*94.7*	"	
otal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/14/99		0.0500	**3.85**	mg/l	5
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*52.3*	%	

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RI	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: **W-4-MW13**
aboratory Sample Number: **P904039-11**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
asoline	9040081	4/5/99	4/5/99		100	**3730**	ug/l	
Benzene	"	"	"		1.00	**35.9**	"	
oluene	"	"	"		1.00	**1.58**	"	
thylbenzene	"	"	"		1.00	**150**	"	
Xylenes (total)	"	"	"		1.00	**112**	"	
Methyl tert-butyl ether	"	"	"		4.00	**15.5**	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*87.7*	%	
urrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*96.0*	"	
otal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/14/99		0.0500	**0.688**	mg/l	4
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*79.0*	%	

**Refer to end of report for text of notes and definitions.*

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RI	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: **W-14-MW6**
aboratory Sample Number: **P904039-12**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9040081	4/5/99	4/5/99		500	**12600**	ug/l	
Benzene	"	"	"		5.00	**3380**	"	
oluene	"	"	"		5.00	**16.5**	"	
thylbenzene	"	"	"		5.00	**221**	"	
Xylenes (total)	"	"	"		5.00	**190**	"	
Methyl tert-butyl ether	"	"	"		20.0	ND	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*93.0*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*95.0*	"	
otal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/14/99		0.0500	2.67	mg/l	4
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*70.3*	%	

**Refer to end of report for text of notes and definitions.*

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I	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

mple Description: W-5-MW8
aboratory Sample Number: P904039-13

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
tal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
asoline	9040081	4/5/99	4/5/99		250	13000	ug/l	
Benzene	"	"	"		2.50	336	"	
oluene	"	"	"		2.50	53.2	"	
thylbenzene	"	"	"		2.50	415	"	
Xylenes (total)	"	"	"		2.50	326	"	
Methyl tert-butyl ether	"	"	"		10.0	22.6	"	
rrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*91.7*	*%*	
urrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*95.0*	"	
tal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/15/99		0.0500	2.25	mg/l	4
urrogate: o-Terphenyl	"	"	"	*50.0-150*		*70.6*	*%*	

Sequoia Analytical

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Petaluma, CA 94954
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FAX (707) 792-0342

RI	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

ample Description: W-3-MW12
Laboratory Sample Number: P904039-14

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
				Sequoia Analytical - Petaluma				
otal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9040081	4/5/99	4/5/99		500	40600	ug/l	
Benzene	"	"	"		5.00	328	"	
oluene	"	"	"		5.00	182	"	
thylbenzene	"	"	"		5.00	1690	"	
Xylenes (total)	"	"	"		5.00	3930	"	
ethyl tert-butyl ether	"	"	"		20.0	ND	"	
urrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*96.0*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*96.7*	"	
otal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
iesel	9040157	4/7/99	4/15/99		0.0500	5.07	mg/l	4
Surrogate: o-Terphenyl	"	"	"	*50.0-150*		*77.2*	%	

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RI	Project:	Exxon	Sampled: 3/24/99
3 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Sample Description: **TB**
Laboratory Sample Number: **P904039-15**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9040081	4/5/99	4/5/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*84.7*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*95.7*	"	

Sequoia Analytical

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l	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

mple Description: **W-BB-MW10**
aboratory Sample Number: **P904039-16**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
				Sequoia Analytical - Petaluma				
tal Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								2
asoline	9040564	4/23/99	4/23/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
luene	"	"	"		0.500	ND	"	
hylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
ethyl tert-butyl ether	"	"	"		2.00	ND	"	
rrogate: a,a,a-Trifluorotoluene	"	"	"	*65.0-135*		*91.7*	%	
urrogate: 4-Bromofluorobenzene	"	"	"	*65.0-135*		*102*	"	
tal Petroleum Hydrocarbons as Diesel & others by EPA 8015M								
esel	9040157	4/7/99	4/15/99		0.0500	ND	mg/l	
urrogate: o-Terphenyl	"	"	"	*50.0-150*		*55.4*	%	

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 3/24/99
3 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9040080	**Date Prepared: 4/5/99**					**Extraction Method: EPA 5030 waters**				
Blank	9040080-BLK1									
Gasoline	4/5/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	0.500				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*311*	"	*65.0-135*	*104*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*287*	"	*65.0-135*	*95.7*			
LCS	9040080-BS1									
Benzene	4/5/99	100		110	ug/l	65.0-135	110			
Toluene	"	100		108	"	65.0-135	108			
Ethylbenzene	"	100		102	"	65.0-135	102			
Xylenes (total)	"	300		324	"	65.0-135	108			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*305*	"	*65.0-135*	*102*			
Matrix Spike	9040080-MS1		P904068-03							
Benzene	4/5/99	100	2.79	107	ug/l	65.0-135	104			
Toluene	"	100	ND	102	"	65.0-135	102			
Ethylbenzene	"	100	3.95	99.5	"	65.0-135	95.6			
Xylenes (total)	"	300	ND	304	"	65.0-135	101			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*299*	"	*65.0-135*	*99.7*			
Matrix Spike Dup	9040080-MSD1		P904068-03							
Gasoline	4/5/99		108	ND	ug/l	65.0-135		20.0		
Benzene	"	100	2.79	107	"	65.0-135	104	20.0	0	
Toluene	"	100	ND	102	"	65.0-135	102	20.0	0	
Ethylbenzene	"	100	3.95	101	"	65.0-135	97.1	20.0	1.56	
Xylenes (total)	"	300	ND	309	"	65.0-135	103	20.0	1.96	
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*294*	"	*65.0-135*	*98.0*			
Batch: 9040081	**Date Prepared: 4/5/99**					**Extraction Method: EPA 5030 waters**				
Blank	9040081-BLK1									
Gasoline	4/5/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*288*	"	*65.0-135*	*96.0*			

Sequoia Analytical

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J	Project: Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number: 720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager: Peter Petro	Reported: 4/26/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Blank (continued)	**9040081-BLK1**									
Surrogate: 4-Bromofluorobenzene	*4/5/99*	*300*		*277*	*ug/l*	*65.0-135*	*92.3*			
LCS	**9040081-BS1**									
Benzene	4/5/99	100		94.8	ug/l	65.0-135	94.8			
Toluene	"	100		91.2	"	65.0-135	91.2			
Ethylbenzene	"	100		89.4	"	65.0-135	89.4			
Xylenes (total)	"	300		270	"	65.0-135	90.0			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*295*	"	*65.0-135*	*98.3*			
Matrix Spike	**9040081-MS1**		**P904036-01**							
Benzene	4/5/99	100	ND	97.2	ug/l	65.0-135	97.2			
Toluene	"	100	ND	95.6	"	65.0-135	95.6			
Ethylbenzene	"	100	ND	93.0	"	65.0-135	93.0			
Xylenes (total)	"	300	ND	279	"	65.0-135	93.0			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*299*	"	*65.0-135*	*99.7*			
Matrix Spike Dup	**9040081-MSD1**		**P904036-01**							
Benzene	4/5/99	100	ND	105	ug/l	65.0-135	105	20.0	7.72	
Toluene	"	100	ND	103	"	65.0-135	103	20.0	7.45	
Ethylbenzene	"	100	ND	101	"	65.0-135	101	20.0	8.25	
Xylenes (total)	"	300	ND	303	"	65.0-135	101	20.0	8.25	
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*320*	"	*65.0-135*	*107*			
Batch: 9040082	**Date Prepared: 4/5/99**					**Extraction Method: EPA 5030 waters**				
Blank	**9040082-BLK1**									
Gasoline	4/5/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*281*	"	*65.0-135*	*93.7*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*294*	"	*65.0-135*	*98.0*			
LCS	**9040082-BS1**									
Gasoline	4/5/99			ND	ug/l	65.0-135				
Benzene	"	100		115	"	65.0-135	115			
Toluene	"	100		111	"	65.0-135	111			
Ethylbenzene	"	100		102	"	65.0-135	102			
Xylenes (total)	"	300		321	"	65.0-135	107			
Methyl tert-butyl ether	"	100		113	"	65.0-135	113			

**Refer to end of report for text of notes and definitions.*

Sequoia Analytical

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I	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
CS (continued)	**9040082-BS1**									
rrogate: a,a,a-Trifluorotoluene	*4/5/99*	*300*		*309*	*ug/l*	*65.0-135*	*103*			
Matrix Spike	**9040082-MS1**		**P904038-01**							
asoline	4/5/99		ND	ND	ug/l	65.0-135				
enzene	"	100	ND	111	"	65.0-135	**111**			
Toluene	"	100	ND	109	"	65.0-135	**109**			
thylbenzene	"	100	ND	100	"	65.0-135	**100**			
ylenes (total)	"	300	ND	314	"	65.0-135	**105**			
Methyl tert-butyl ether	"	100	ND	110	"	65.0-135	**110**			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*295*	"	*65.0-135*	*98.3*			
Matrix Spike Dup	**9040082-MSD1**		**P904038-01**							
Gasoline	4/5/99		ND	ND	ug/l	65.0-135		20.0		
enzene	"	100	ND	107	"	65.0-135	**107**	20.0	**3.67**	
oluene	"	100	ND	105	"	65.0-135	**105**	20.0	**3.74**	
thylbenzene	"	100	ND	97.3	"	65.0-135	**97.3**	20.0	**2.74**	
Xylenes (total)	"	300	ND	305	"	65.0-135	**102**	20.0	**2.90**	
Methyl tert-butyl ether	"	100	ND	106	"	65.0-135	**106**	20.0	**3.70**	
urrogate: a,a,a-Trifluorotoluene	"	*300*		*280*	"	*65.0-135*	*93.3*			
Batch: 9040564	**Date Prepared: 4/23/99**					**Extraction Method: EPA 5030 waters**				
Blank	**9040564-BLK1**									
Gasoline	4/23/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*277*	"	*65.0-135*	*92.3*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*305*	"	*65.0-135*	*102*			
LCS	**9040564-BS1**									
Gasoline	4/23/99	1000		936	ug/l	65.0-135	93.6			
Surrogate: 4-Bromofluorobenzene	"	*300*		*298*	"	*65.0-135*	*99.3*			
Matrix Spike	**9040564-MS1**		**P904397-01**							
Gasoline	4/23/99	1000	ND	919	ug/l	65.0-135	**91.9**			
Surrogate: 4-Bromofluorobenzene	"	*300*		*303*	"	*65.0-135*	*101*			
Matrix Spike Dup	**9040564-MSD1**		**P904397-01**							
Gasoline	4/23/99	1000	ND	907	ug/l	65.0-135	**90.7**	20.0	**1.31**	

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RI	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup (continued)	9040564-MSD1		P904397-01							
Surrogate: 4-Bromofluorobenzene	*4/23/99*	*300*		*304*	*ug/l*	*65.0-135*	*101*			

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I	Project:	Exxon	Sampled: 3/24/99
Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Total Petroleum Hydrocarbons as Diesel & others by EPA 8015M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9040157	**Date Prepared: 4/7/99**					**Extraction Method: EPA 3510B**				
Blank	**9040157-BLK1**									
Diesel	4/14/99			ND	mg/l	0.0500				
Surrogate: o-Terphenyl	"	*0.100*		*0.0712*	"	*50.0-150*	*71.2*			
LCS	**9040157-BS1**									
Diesel	4/14/99	1.00		0.293	mg/l	50.0-150	29.3			6
Surrogate: o-Terphenyl	"	*0.100*		*0.0627*	"	*50.0-150*	*62.7*			
LCS Dup	**9040157-BSD1**									
Diesel	4/14/99	1.00		0.555	mg/l	50.0-150	55.5	20.0	61.8	
Surrogate: o-Terphenyl	"	*0.100*		*0.0820*	"	*50.0-150*	*82.0*			

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RI	Project:	Exxon	Sampled: 3/24/99
3 Digital Dr. Suite 6	Project Number:	720 High St.,Oakland/201013X	Received: 4/1/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 4/26/99

Notes and Definitions

Note	
1	Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel. The pattern more closely resembles that of a heavier fuel.
2	This sample was analyzed outside the EPA recommended holding time.
	Unknown hydrocarbons.
4	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
	Weathered diesel.
6	LCS recovery outside of control limits. Batch passed on LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
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Environmental Resolutions
74 Digital Drive , Suite 6
Novato, CA 94949
Attention: Peter Petro

Client Proj. ID: Exxon7-3006 201011x

Lab Proj. ID: 9901269

Received: 01/07/99

Reported: 01/26/99

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 6 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Although there is an industry standard of three days holding time for air analysis, there is no method prescribed hold time. The samples in this project were analyzed outside of the industry standard hold time.

SEQUOIA ANALYTICAL

Project Manager

Sequoia Analytical

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

Attention: Peter Petro

Client Proj. ID: Exxon7-3006 201011x
Sample Descript: A-Inf
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9901269-01

Sampled: 01/06/99
Received: 01/07/99

Analyzed: 01/11/99
Reported: 01/26/99

QC Batch Number: GC011199BTEX30A
Instrument ID: GCHP30

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	63
Benzene	0.10	0.15
Toluene	0.10	1.4
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	0.20
Chromatogram Pattern:		c6-c12
Unidentified HC		
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

Project Manager

Sequoia Analytical

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

Attention: Peter Petro

Client Proj. ID: Exxon7-3006 201011x
Sample Descript: A-Eff
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9901269-02

Sampled: 01/06/99
Received: 01/07/99

Analyzed: 01/11/99
Reported: 01/26/99

QC Batch Number: GC011199BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		
Surrogates	**Control Limits %**	**% Recovery**
Trifluorotoluene	70 130	81

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

SEQUOIA ANALYTICAL - ELAP #1210

Project Manager

Sequoia Analytical

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Environmental Resolutions
74 Digital Drive, Suite 6
Novato, CA 94949
Attention: Peter Petro

Client Project ID: Exxon 7-3006 201011X

QC Sample Group: 9901269

Reported: Jan 26, 1999

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: JS

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #: GC011199BTEX17A				
Sample No.: GW9901339-04				
Date Prepared:	1/11/99	1/11/99	1/11/99	1/11/99
Date Analyzed:	1/11/99	1/11/99	1/11/99	1/11/99
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:	10.0	10.0	11	32
% Recovery:	100.0	100.0	110	107
Matrix pike Duplicate, ug/L:	10.0	10.0	10.0	31
% Recovery:	100.0	100.0	100.0	103
elative % Difference:	0.0	0.0	9.5	3.8
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#: GC011199BTEX17A

Date Prepared:	1/11/99	1/11/99	1/11/99	1/11/99
Date Analyzed:	1/11/99	1/11/99	1/11/99	1/11/99
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	9.3	9.5	10.0	30
LCS % Recovery:	93	95	100.0	100.0

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.

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: Peter Petro

Client Project ID: Exxon 7-3006 201011X

QC Sample Group: 9901269

Reported: Jan 26, 1999

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: N.H.

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC011199BTEX30A			
Sample No.:	9901279-1			
Date Prepared:	1/11/99	1/11/99	1/11/99	1/11/99
Date Analyzed:	1/11/99	1/11/99	1/11/99	1/11/99
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:	9.5	9.7	9.9	30
% Recovery:	95	97	99	100.0
Matrix pike Duplicate, ug/L:	9.4	9.6	9.9	30
% Recovery:	94	96	99	100.0
elative % Difference:	1.1	1.0	0.0	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GC011199BTEX30A			
Date Prepared:	1/11/99	1/11/99	1/11/99	1/11/99
Date Analyzed:	1/11/99	1/11/99	1/11/99	1/11/99
Instrument I.D.#:	GCHP30	GCHP30	GCHP30	GCHP30
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	9.5	9.8	10.0	30
LCS % Recovery:	95	98	100.0	100.0

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

CHAIN OF CUSTODY

9901269

Page 1 of 1

Consultant's Name: Environmental Resolutions Inc		
Address: 74 Digital Dr. Novato Ca 94949		Site Location: 720 High St. Oakland Ca
Project #: 20104K	Consultant Project #: 20101K	Consultant Work Release #: 19432503
Project Contact: Peter Petro	Phone #: (415) 382-9105	Laboratory Work Release #:
EXXON Contact: Marla Gunsler	Phone #: (925) 246-8776	EXXON RAS #: 7-3006
Sampled by (print): Joel Dyer	Sampler's Signature: Joel Dyer	
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			Temperature: / Inbound Seal: Yes No / Outbound Seal: Yes No
1	A-Inf	1/6/99	3:20	Air	-	1		X					
2	A-Eff	1/6/99	3:15	Air	-	1		X					

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Joel Dyer / ERI	1/7/99	1100	Elaine / Sequoia	1/7	1100	
Elaine	1/7/99					

Pink - Client
Yellow - Sequoia
White - Sequoia

Sequoia Analytical

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February 8, 1999

Peter Petro
ERI
74 Digital Dr. Suite 6
Novato, CA 94949

RE: Exxon/P902138

Dear Peter Petro:

Enclosed are the results of analyses for sample(s) received by the laboratory on February 5, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matt Sakai
Project Manager

CA ELAP Certificate Number 2245

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 2/4/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 2/5/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 2/8/99

ANALYTICAL REPORT FOR P902138

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
A-Inf	P902138-01	Air	2/4/99
A-Eff	P902138-02	Air	2/4/99

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 2/4/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 2/5/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 2/8/99

Sample Description: A-Inf
Laboratory Sample Number: P902138-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9020149	2/5/99	2/5/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	-		*99.3*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"	-		*103*	"	

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 2/4/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 2/5/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 2/8/99

Sample Description: A-Eff
Laboratory Sample Number: P902138-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9020149	2/5/99	2/5/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	-		*97.0*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	-		*101*	"	

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 2/4/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 2/5/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 2/8/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9020149	**Date Prepared: 2/5/99**					**Extraction Method: EPA 5030 waters**				
Blank	**9020149-BLK1**									
Gasoline	2/5/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*310*	"		*103*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*284*	"		*94.7*			
LCS	**9020149-BS1**									
Gasoline	2/5/99	1000		1080	ug/l		108			
Surrogate: 4-Bromofluorobenzene	"	*300*		*305*	"		*102*			
Matrix Spike	**9020149-MS1**		**P902010-04**							
Gasoline	2/5/99	1000	ND	1060	ug/l		106			
Surrogate: 4-Bromofluorobenzene	"	*300*		*293*	"		*97.7*			
Matrix Spike Dup	**9020149-MSD1**		**P902010-04**							
Gasoline	2/6/99	1000	ND	1100	ug/l		110	3.70		
Surrogate: 4-Bromofluorobenzene	"	*300*		*298*	"		*99.3*			

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 2/4/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 2/5/99
Novato, CA 94949	Project Manager:	Peter Petro	Reported: 2/8/99

Notes and Definitions

#	Note
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

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CHAIN OF CUSTODY

Consultant's Name: Environmental Resolutions Inc.			**Page** 1 of 1
Address: 74 Digital Dr #6 Novato, Ca. 94949			**Site Location:** 720 High St. Oakland, CA
Project #: 2010 11X	**Consultant Project #:** 2010 11X		**Consultant Work Release #:** 19432503
Project Contact: Peter Petro	**Phone #:** (415) 382-9105		**Laboratory Work Release #:**
EXXON Contact: Marla Grunsier	**Phone #:** (925) 246-8776		**EXXON RAS #:** 7-3006
Sampled by (print): Joel Dyer	**Sampler's Signature:** Joel Dyer		
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			Temperature:_____ Inbound Seal: Yes No Outbound Seal: Yes No
A - Inf	2/4/99	4:50	Air	+	1	902138-01	X					
A - Eff	2/4/99	4:45	Air	—	1	-02	X					
COOLER CUSTODY SEALS INTACT ☐ NOT INTACT ☐												
COOLER TEMPERATURE _____ °C												

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Joel Dyer	2/5/99	1100	[signature] / Seq.	2/5	1100	
[signature] / Seq.	2/5/99		[signature] Seq.	2-5	1630	

Pink - Client
Yellow - Sequoia
White - Sequoia

Sequoia Analytical

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March 25, 1999

Keith Romstad
ERI
74 Digital Dr. Suite 6
Novato, CA 94949

RE: Exxon/P903582

Dear Keith Romstad:

Enclosed are the results of analyses for sample(s) received by the laboratory on March 20, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matt Sakai
Project Manager

CA ELAP Certificate Number 2245

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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ERI	Project:	Exxon	Sampled: 3/18/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 3/20/99
Novato, CA 94949	Project Manager:	Keith Romstad	Reported: 3/25/99

ANALYTICAL REPORT FOR P903582

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
A-INF	P903582-01	Air	3/18/99
A-EFF	P903582-02	Air	3/18/99

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 3/18/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 3/20/99
Novato, CA 94949	Project Manager:	Keith Romstad	Reported: 3/25/99

Sample Description: **A-INF**
Laboratory Sample Number: **P903582-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9030580	3/21/99	3/21/99		10.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"			*97.0*	*%*	
Surrogate: 4-Bromofluorobenzene	"	"	"			*103*	"	

Sequoia Analytical

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ERI	Project:	Exxon	Sampled: 3/18/99
74 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 3/20/99
Novato, CA 94949	Project Manager:	Keith Romstad	Reported: 3/25/99

Sample Description: **A-EFF**
Laboratory Sample Number: **P903582-02**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9030580	3/21/99	3/21/99		10.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	-		*97.0*	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	-		*104*	"	

Sequoia Analytical

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ERI	Project: Exxon	Sampled:	3/18/99
4 Digital Dr. Suite 6	Project Number: 2010-11X	Received:	3/20/99
Novato, CA 94949	Project Manager: Keith Romstad	Reported:	3/25/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control
Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9030580	**Date Prepared: 3/21/99**					**Extraction Method: EPA 5030 waters**				
Blank	**9030580-BLK1**									
Gasoline	3/21/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*275*	"		*91.7*			
Surrogate: 4-Bromofluorobenzene	"	*300*		*297*	"		*99.0*			
LCS	**9030580-BS1**									
Benzene	3/21/99	100		95.8	ug/l		95.8			
Toluene	"	100		94.5	"		94.5			
Ethylbenzene	"	100		88.5	"		88.5			
Xylenes (total)	"	300		278	"		92.7			
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*285*	"		*95.0*			
LCS Dup	**9030580-BSD1**									
Benzene	3/21/99	100		91.7	ug/l		91.7	4.37		
Toluene	"	100		90.5	"		90.5	4.32		
Ethylbenzene	"	100		84.7	"		84.7	4.39		
Xylenes (total)	"	300		267	"		89.0	4.07		
Surrogate: a,a,a-Trifluorotoluene	"	*300*		*275*	"		*91.7*			

Sequoia Analytical

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RI	Project:	Exxon	Sampled: 3/18/99
4 Digital Dr. Suite 6	Project Number:	2010-11X	Received: 3/20/99
Novato, CA 94949	Project Manager:	Keith Romstad	Reported: 3/25/99

Notes and Definitions

Note	
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

Sequoia Analytical
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Redwood City, CA 94063
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EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

PQ903582

Page 1 of 1

Consultant's Name: Environmental Resolutions Inc			
Address: 74 Digital Dr. Suite 6 Novato, CA. 94949			
Project #: 2010-11X	**Consultant Project #:** 2010-11X	**Site Location:** Oakland	
Project Contact: Mark Bocken	**Phone #:** 415-382-9105	**Consultant Work Release #:** 19432503	
EXXON Contact: Marla Feuerstein	**Phone #:** 925-246-8776	**Laboratory Work Release #:**	
Sampled by (print): Stewart Kelly	**Sampler's Signature:** Stewart Kelly	**EXXON RAS #:** 7-3006	
Shipment Method:	**Air Bill #:**	720 High St. Oakland, CA.	

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			Temperature:_____ Inbound Seal: Yes No Outbound Seal: Yes No
A-INF	3/18/99	16:00	Air	0	1			-01				
A-EFF	3/18/99	16:00	Air	0	1		X	-02				

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Stewart Kelly / ERI			MK	3/19	1030	
MK	3/19		CRC	3-19	1315	
CRC	3-19		Anna DeMuro	3/19	1530	

Pink - Client
Yellow - Sequoia
White - Sequoia

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
1551 Industrial Road, San Carlos, CA 94070-4111, (650) 232-9600, FAX (650) 232-9612

Environmental Resolutions
73 Digital Drive, Suite 100
Novato, CA 94949
Attention: Peter Petro

Client Proj. ID: Exxon 7-3006, 201011X

Lab Proj. ID: 9904571

Received: 04/16/99

Reported: 04/22/99

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 5 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Jackie Tague Clark
Project Manager

Sequoia Analytical

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Environmental Resolutions
73 Digital Drive, Suite 100
Novato, CA 94949

Attention: Peter Petro

Client Proj. ID: Exxon 7-3006, 201011X
Sample Descript: A-Inf
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9904571-01

Sampled: 04/16/99
Received: 04/16/99

Analyzed: 04/19/99
Reported: 04/22/99

QC Batch Number: GC041999BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	88

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

SEQUOIA ANALYTICAL - ELAP #1210

Jackie Tague Clark
Project Manager

Sequoia Analytical

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1551 Industrial Road, San Carlos, CA 94070-4111, (650) 232-9600, FAX (650) 232-9612

Environmental Resolutions
73 Digital Drive, Suite 100
Novato, CA 94949

Attention: Peter Petro

Client Proj. ID: Exxon 7-3006, 201011X
Sample Descript: A-Eff
Matrix: AIR
Analysis Method: 8015Mod/8020
Lab Number: 9904571-02

Sampled: 04/16/99
Received: 04/16/99

Analyzed: 04/19/99
Reported: 04/22/99

QC Batch Number: GC041999BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	88

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

SEQUOIA ANALYTICAL - ELAP #1210

Jackie Tague Clark
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Environmental Resolutions
73 Digital Drive, Suite 100
Novato, CA 94949
Attention: Peter Petro

Client Project ID: Exxon 7-3006, 201011x

QC Sample Group: 9904571

Reported: Apr 22, 1999

QUALITY CONTROL DATA REPORT

Matrix:	Liquid			
Method:	EPA 8020			
Analyst:	JAB			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC041999BTEX02A			
Sample No.:	GW9904491-3			
Date Prepared:	4/19/99	4/19/99	4/19/99	4/19/99
Date Analyzed:	4/19/99	4/19/99	4/19/99	4/19/99
Instrument I.D.#:	GCHP02	GCHP02	GCHP02	GCHP02
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	8.1	8.2	8.4	24
% Recovery:	81	82	84	80
Matrix pike Duplicate, ug/L:	8.7	8.6	8.6	26
% Recovery:	87	86	86	87
elative % Difference:	7.1	4.8	2.4	8.4
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GC041999BTEX02A			
Date Prepared:	4/19/99	4/19/99	4/19/99	4/19/99
Date Analyzed:	4/19/99	4/19/99	4/19/99	4/19/99
Instrument I.D.#:	GCHP02	GCHP02	GCHP02	GCHP02
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	9.1	9.1	9.1	27
LCS % Recovery:	91	91	91	90

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.

[redacted] COMPANY, U.S.A.

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Redwood City, CA 94063
(650) 364-9600 • FAX (650) 364-9233

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

CHAIN OF CUSTODY

Consultant's Name: Environmental Resolutions, Inc.			Page 1 of 1
Address: 73 Digital Drive #100 Novato Ca 94949			Site Location: 720 High St.
Project #:	Consultant Project #: 2010 CIR		Consultant Work Release #: 19432503
Project Contact: Peter Petro	Phone #: (415) 382-9105		Laboratory Work Release #:
EXXON Contact: Marla Guenzler	Phone #: (925) 246-8776		EXXON RAS #: 7-3006
Sampled by (print): Joel Dyer	Sampler's Signature: Joel Dyer		Oakland, CA.
Shipment Method:	Air Bill #:		

TAT: ☐ 24 hr ☐ 48 hr ☐ 72 hr ☐ 96 hr ~~☐ Standard~~ (10 day) 9904571

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			Temperature: _____ Inbound Seal: Yes No Outbound Seal: Yes No
A Inf	2/16/99	12:15	Air		1	01	X					
A-Eff	2/16/99	12:14	Air		1	02	X					

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Joel Dyer / ERT						
			Chris Dean / Sequoia	4/16/99	1340	

Pink - Client
Yellow - Sequoia
White - Sequoia

ATTACHMENT C

ERI SOP-25 "HYDROCARBONS REMOVED FROM A VADOSE WELL"

HYDROCARBONS REMOVED FROM A VADOSE WELL
SOP-25
Rev: JO'C

Rev. 4/29/97

POUNDS OF HYDROCARBON IN AN VAPOR STREAM

INPUT DATA:
1) Vapor flow rate acfm (usually by Pitot tube)
2) Vapor pressure at the flow measuring device (in inches of H_2O) (use {-} for vacuum)
3) Vapor temperature at the flow measuring device.
4) Hydrocarbon content of vapor (usually in mg/M^3) for ppmv you need molecular weight.
5) Length of time (usually hours) over which flow rate occurred)

From periodic measurements, a calculation of total pounds of hydrocarbons removed from a well or from a system are calculated. The input data listed above are measured at a point in time. To calculate quantities removed, some assumptions must be made about what was happening between measurements. The following assumptions will be used for the sake of consistency:

ASSUMPTIONS:
1) Vapor flow for the period equals the average of the initial and final reading for the period.
2) Pressure and temperature for the entire period will be the final reading.
3) Hydrocarbon concentration for the period equals the average of the initial and final reading.
4) The hours of operation can be taken from an hour meter, an electric meter or will be assumed to be equal to the time between measurements.
5) If the unit is found down - try to determine how many hours it did operate and use the data taken for the previous period to make the calculations. Restart the unit and then take data to start the next period.

SAMPLE DATA AND CALCULATIONS

Date	Time	Temp deg F	Press in H_2O	HC conc mg/M3 acfm	Vapor flow lb.	Calc. rem.
1/6/95	11:00	70	-46	2000	120	
1/7/95	13:00	55	-50	1350	90	
1/8/95	10:00	80	-13	750	100	7.4

Calculate the pounds of hydrocarbon removed from the system during the basis period from 13:00 (1:00 pm) on the 7th to 10 am on the 8th. Pressure and temperature of the measurements (at the flow meter) must be corrected to the P and T used to report the HC concentration (which are P = 1 atm and T = 70 deg F). 1 atm = 14.7psia, 760 mm Hg, or 407 in H_2O. T_{abs} = 460 + T deg F

Hours of operation = 21, T = 80, P = -13, HC = (1350+750)/2 = 1050 mg/M^3, Flow = 95

$$21 \times 60 \times 95 \times \frac{(460+70)}{(460+80)} \times \frac{(407-13)}{407} \times \frac{28.3}{1000} \times \frac{1050}{1000} \times \frac{1}{454} = 7.4 \text{ lb}$$

$$\frac{\text{hr}}{\text{basis}} \times \frac{\text{min}}{\text{hr}} \times \frac{\text{cu ft}}{\text{min}} \times T_{Corr} \times P_{Corr} \times \frac{M^3}{\text{cu ft}} \times \frac{\text{g}}{M^3} \times \frac{\text{lb}}{\text{g}} = \frac{\text{lb}}{\text{basis}}$$

$$21 \times 60 \times 95 \times 0.98 \times 0.97 \times 0.0283 \times 1.050 \times 1/454 = 7.4 \text{ lb.}$$

cumulative lbs. (the running total) = the sum of all the previous periods.

Note: If results are given in ppm, an assumption about the molecular weight of the hydrocarbon must be made to get mg/M^3. ppmv x molecular wt. /24.1 = mg/M^3. (Use 102 for gasoline)