

EXXON COMPANY, U.S.A.

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

DARIN L. ROUSE
SENIOR ENGINEER

(925) 246-8768
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November 9, 1999

#136

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


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

Dear Mr. Chan:

Attached for your review and comment is a letter report entitled *Quarterly Groundwater Monitoring and Remediation Status Report, Third Quarter 1999*, dated October 28, 1999, for the above referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details the results of the quarterly groundwater monitoring, sampling, and remedial activities at the subject site.

If you have any questions or comments, please contact me at (925) 246-8768.

Sincerely,


Darin L. Rouse
Senior Engineer

Attachment: ERI's Quarterly Groundwater Monitoring and Remediation Status Report, Third Quarter 1999, dated October 28, 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.
Ms. Kathy Simonelli - Geologic Services Corporation

99 NOV 9 - 9 PM 3:36

ENVIRONMENTAL
PROTECTION



October 28, 1999
ERI 201013.R21

Mr. Darin L. Rouse
Exxon Company, U.S.A.
P.O. Box 4032
Concord, California 94524-4032

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

Mr. Rouse:

At the request of Exxon Company, U.S.A. (Exxon), Environmental Resolutions, Inc. (ERI) is reporting the results of third quarter 1999 groundwater monitoring and sampling activities at the subject site. The location of the site is shown on the Site Vicinity Map (Plate 1). The purpose of quarterly monitoring and sampling is to evaluate concentrations of dissolved hydrocarbons in groundwater and the effectiveness of remedial actions. The locations of selected site features are shown on the Generalized Site Plan (Plate 2). Blaine Tech Services, Inc. (Blaine Tech) performed the groundwater monitoring and sampling activities and ERI performed operation and maintenance activities.

GROUNDWATER MONITORING AND SAMPLING

On September 29, 1999, Blaine Tech measured the depth to water (DTW) and collected groundwater samples from select wells for laboratory analysis. Work was performed in accordance with Blaine Tech's groundwater sampling protocol (Attachment A).

Due to recent 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., a state-certified laboratory, 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. The AS/SVE system was shut down July 28, 1999. 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.

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 were used to transfer extracted groundwater to a holding tank. A transfer pump and polyvinyl chloride (PVC) piping were 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 was discharged to the sanitary sewer regulated by East Bay Municipal Utilities District (EBMUD).

The GRS system was shut down on December 23, 1998. Cumulative 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 calculated according to ERI's standard operation procedures (SOP-25 "Hydrocarbons Removed from a Vadose Well") included in Attachment C. ERI has shut down the AS/SVE and has no plans to restart or operate the remedial systems during the fourth quarter 1999. ERI will report the results of the monitoring and sampling of the groundwater at the site during the fourth 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
06/17/99 - 7/28/99	4	< 1
To Date:	5,144	845

The GRS was not operational during the third 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
06/17/99 - 07/28/99	0	0
To Date:	10	2

LIMITATIONS

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

ERI recommends forwarding copies of this report to:

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

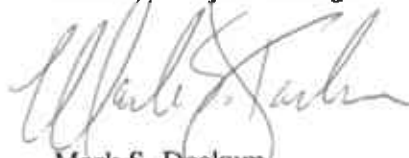
Mr. Stephen Hill
 California Regional Water Quality Control Board
 San Francisco Bay Region
 1515 Clay Street, Suite 1400
 Oakland, California 94612

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



- 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
 (Page 2 of 11)

Well ID #	Sampling	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
(TOC)	Date	<.....>	feet.....>	<.....>	ug/l.....>									
MW2 (cont.) (12.98)	6/7/95	Sheen	7.14	5.84	---	---	---	---	---	---	---	---	---	---
	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	---	---	---
	6/22/99	NLPH	6.42	6.56	2,310	1,080	25.2	54.3	14.9	38.8	107	---	---	---
9/29/99	NLPH	8.00	4.98	2,720 ^f	517	15.4	37.5	7.48	12.9	15.2	---	---	---	
MW3 (12.92)	1/20/94	Sheen	8.24	4.68	---	---	---	---	---	---	---	---	---	---
	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	---	---	---	

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Well ID #	Sampling	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
(TOC)	Date	<.....>	feet.....>	<.....>	ug/l.....>									
MW3 (cont.) (12.92)	3/24/98	NLPH	5.93	6.99	4,600	1,500	25	5,500	<5.0	<5.0	<5.0	---	---	---
	6/23/98	NLPH	11.13	1.79	39,000	1,300	9.4	53	<1.0	<1.0	<1.0	---	---	---
	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	<5.0	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	---	---	---
	6/22/99	NLPH	6.22	6.70	6,860	1,470	<10	492	<2.5	<2.5	<2.5	---	---	---
	9/29/99	NLPH	8.10	4.82	2,290 ^f	315	<5.0	11.5	3.07	<1.0	2.54	---	---	---
	MW4 (12.77)	1/20/94	--- [NR]	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---
6/22/99	NLPH	5.71	7.06	9,760	1,470	<10	404	<2.5	<2.5	<2.5	---	---	---	
9/29/99	NLPH	7.32	5.45	2,470 ^f	589 ^c	8.12	12.6	<1.0	<1.0	<1.0	---	---	---	
MW5	7/18/89	Well Destroyed												

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >.....<	TEPHd <.....>	TPPHg <.....>	MTBE <.....>	B <.....>	T ug/l	E <.....>	X <.....>	VOCs <.....>	EHCss <.....>	TOG <.....>
MW6 (14.27)	1/20/94	--- [NR]	---	---	---	---	---	---	---	---	---	---	---	---
	02/02-03/94	--- [NR]	---	---	---	---	---	---	---	---	---	---	---	---
	3/10/94	[¼ c.]	7.82	6.45	---	---	---	---	---	---	---	---	---	---
	4/22/94	[10 c.]	---	---	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	[3 c.]	---	---	---	---	---	---	---	---	---	---	---	---
	6/27/94	Sheen	7.77	6.50	---	---	---	---	---	---	---	---	---	---
	8/31/94	Sheen	9.02	5.25	---	---	---	---	---	---	---	---	---	---
	9/29/94	Sheen	9.51	4.76	---	---	---	---	---	---	---	---	---	---
	10/25/94	Sheen	9.93	4.34	---	---	---	---	---	---	---	---	---	---
	11/30/94	---	8.05	6.22	---	---	---	---	---	---	---	---	---	---
	12/27/94	---	7.54	6.73	---	---	---	---	---	---	---	---	---	---
	2/6/95	Sheen	5.86	8.41	---	---	---	---	---	---	---	---	---	---
	6/7/95	Sheen	8.07	6.20	---	---	---	---	---	---	---	---	---	---
	9/18/95	Sheen	10.54	3.73	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	11.41	2.86	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	9.17	5.10	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	7.13	7.14	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	11.24	3.03	---	---	---	---	---	---	---	---	---	---
	12/11/96	NLPH	9.20	5.07	2,900	9,100	<100	2,100	22	160	260	---	---	---
	3/19/97	NLPH	10.14	4.13	3,800	24,000	250	5,800	91	1,300	1,900	---	---	---
	6/4/97	NLPH	10.58	3.69	3,300	20,000	270	4,400	<50	540	480	---	---	---
	9/2/97	NLPH	11.02	3.25	2,100	8,100	<25	1,800	<25	140	170	---	---	---
	12/2/97	NLPH	10.45	3.82	2,300	6,800	<100	1,100	<20	77	74	---	---	---
3/24/98	NLPH	7.09	7.18	3,800	20,000	<250	4,300	<50	2,200	1,500	---	---	---	
6/23/98	Sheen	9.79	4.48	4,100	19,000	<500	3,400	<100	1,800	1,100	---	---	---	
9/29/98	NLPH	10.56	3.71	2,300	8,600	<100	2,100	25	300	260	---	---	---	
12/30/98	NLPH	9.97	4.30	2,700	6,800	<125	1,600	<25	84	200	---	---	---	
3/24/99	Sheen	5.02	9.25	2,670	12,600	<20	3,380	16.5	221	190	---	---	---	
6/22/99	NLPH	6.91	7.36	5,670	6,720	<40	2,400	<10	767	14.4	---	---	---	
9/29/99	NLPH	8.66	5.61	1,370 ^d	6,310 ^d	<250	<25	<25	133	<25	---	---	---	
MW7 (14.84)	1/20/94	NLPH	8.67	6.17	---	---	---	---	---	---	---	---	---	---
	02/02-03/94	NLPH	8.47	6.37	1,300	2,900	---	79	5	8.2	21	---	---	4,701
	3/10/94	NLPH	8.24	6.60	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	7.95	6.89	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	7.53	7.31	1,300	2,400	---	88	5.6	5.2	15	---	---	1,400
	6/27/94	NLPH	8.01	6.83	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	9.19	5.65	---	---	---	---	---	---	---	---	---	---
	9/29/94	NLPH	9.65	5.19	56	1,900	---	71	3.1	3.5	7.8	---	---	---
	10/25/94	NLPH	9.96	4.88	89	1,400	---	51	1.5	24	6.8	---	---	---
	11/30/94	---	7.78	7.06	---	---	---	---	---	---	---	---	---	---
	12/27/94	---	7.51	7.33	---	---	---	---	---	---	---	---	---	---
2/6/95	NLPH	5.79	9.05	1,300	2,500	---	130	<10	<10	<10	ND	1,100	---	

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 5 of 11)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >	TEPHd <	TPPHg >	MTBE >	B >	T ug/l.	E >	X >	VOCs >	ETHCs >	TOG >
MW7 (cont.) (14.84)	6/7/95	NLPH	7.73	7.11	1,200	2,400	39	91	5	7.6	14	---	1,000	---
	9/18/95	NLPH	9.81	5.03	1,100	1,800	<25	17	<5.0	<5.0	<5.0	---	870	---
	11/1/95	NLPH	10.56	4.28	1,700	3,000	<13	2.7	11	25	<2.5	---	1,400	---
	2/14/96	NLPH	8.04	6.80	1,200	1,900	<25	59	<5.0	<5.0	<5.0	---	940	---
	6/19/96	NLPH	7.33	7.51	1,400	2,000	<25	96	<5.0	<5.0	5.6	ND	1,000	---
	9/24/96	NLPH	10.10	4.74	1,100	950	<25	6.8	<5.0	<5.0	<5.0	ND	910	---
	12/11/96	NLPH	8.50	6.34	1,600	2,500	<10	50	<2.0	6.4	30	ND	1,100	---
	3/19/97	NLPH	8.88	5.96	840	2,700	<25	61	8.0	21	68	ND	580	---
	6/4/97	NLPH	9.38	5.46	1,000	1,900	<2.5	45	<2.0	5.3	13	ND	780	---
	9/2/97	NLPH	9.69	5.15	790	1,700	<2.5	28	2.2	<2.0	5.9	ND	740	---
	12/2/97	NLPH	8.65	6.19	1,100	2,000	14	33	2.2	2.0	5.8	---	---	---
	3/24/98	NLPH	6.40	8.44	950	2,300	<25	73	<5.0	<5.0	22	---	---	---
	6/23/98	NLPH	8.34	6.50	1,600	4,700	140	50	<5.0	12	20	---	---	---
	9/29/98	NLPH	9.76	5.08	630	700	<5.0	2.7	1.3	2.4	5.3	---	---	---
	12/30/98	NLPH	8.86	5.98	1,700	1,400	<5.0	17	7.7	2.8	16	---	---	---
	3/24/99	Sheen	5.48	9.36	860	1,740	6.73	59.2	2.76	4.33	15.1	---	---	---
	6/22/99	NLPH	6.54	8.30	5,330	3,250	<4.0	59.5	3.96	2.89	6.38	---	---	---
	9/29/99	NLPH	8.45	6.39	1,750 ^f	1,360 ^f	<25	3.07	<2.5	5.02	6.32	---	---	---
	MW8 (13.45)	1/20/94	Sheen	8.90	4.55	---	---	---	---	---	---	---	---	---
02/02-03/94		Sheen	8.58	4.87	---	---	---	---	---	---	---	---	---	---
3/10/94		Sheen	7.16	6.29	---	---	---	---	---	---	---	---	---	---
4/22/94		Sheen	7.34	6.11	---	---	---	---	---	---	---	---	---	---
05/10-11/94		Sheen	7.04	6.41	---	---	---	---	---	---	---	---	---	---
6/27/94		Sheen	6.01	7.44	---	---	---	---	---	---	---	---	---	---
8/31/94		Sheen	9.26	4.19	---	---	---	---	---	---	---	---	---	---
9/29/94		Sheen	9.76	3.69	---	---	---	---	---	---	---	---	---	---
10/25/94		Sheen	10.05	3.40	---	---	---	---	---	---	---	---	---	---
11/30/94		---	7.68	5.77	---	---	---	---	---	---	---	---	---	---
12/27/94		Sheen	7.11	6.34	---	---	---	---	---	---	---	---	---	---
2/6/95		Sheen	5.39	8.06	---	---	---	---	---	---	---	---	---	---
6/7/95		Sheen	7.53	5.92	---	---	---	---	---	---	---	---	---	---
9/18/95		Sheen	9.84	3.61	---	---	---	---	---	---	---	---	---	---
11/1/95		Sheen	10.47	2.98	---	---	---	---	---	---	---	---	---	---
2/14/96		Sheen	8.27	5.18	---	---	---	---	---	---	---	---	---	---
6/19/96		Sheen	6.88	6.57	---	---	---	---	---	---	---	---	---	---
9/24/96		Sheen	10.13	3.32	---	---	---	---	---	---	---	---	---	---
12/11/96		Sheen	8.53	4.92	---	---	---	---	---	---	---	---	---	---
3/19/97		Sheen	9.09	4.36	---	---	---	---	---	---	---	---	---	---
6/4/97	Sheen	9.52	3.93	---	---	---	---	---	---	---	---	---	---	
9/2/97	NLPH	9.72	3.73	8,000	20,000	<50	57	<50	850	660	ND	---	---	
12/2/97	NLPH	8.83	4.62	2,700	6,900	130	83	<10	<10	100	---	---	---	
3/24/98	NLPH	6.52	6.93	2,900	10,000	<125	190	<25	470	330	---	---	---	

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >.....<	TEPHd <.....>	TPPHg >.....<	MTBE >.....<	B >.....<	T >.....<	E >.....<	X >.....<	VOCs >.....<	EHCss >.....<	TOG >.....<
MW8 (cont.) (13.45)	6/23/98	NLPH	9.02	4.43	3,700	10,000	<50	140	<10	460	260	---	---	---
	9/29/98	NLPH	9.72	3.73	3,600	12,000	130	46	<10	340	190	---	---	---
	12/30/98	NLPH	9.06	4.39	3,000	11,000	140	170	<25	230	160	---	---	---
	3/24/99	Sheen	5.21	8.24	2,250	13,000	22.6	336	53.2	415	326	---	---	---
	6/22/99	Sheen	6.51	6.94	4,010	13,000	64.9	174	<5.0	186	13.1	---	---	---
	9/29/99	NLPH	8.22	5.23	2,170 ^d	5,420	<25	20.4	<5.0	<5.0	38.5	---	---	---
MW9 (14.64)	1/20/94	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/02-03/94	---	---	---	---	---	---	---	---	---	---	---	---	---
	3/10/94	NLPH	6.90	7.74	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	7.38	7.26	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	6.96	7.68	---	---	---	---	---	---	---	---	---	---
	6/27/94	NLPH	7.65	6.99	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	8.87	5.77	---	---	---	---	---	---	---	---	---	---
	9/29/94	NLPH	9.19	5.45	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/25/94	NLPH	9.66	4.98	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/30/94	---	8.38	6.26	---	---	---	---	---	---	---	---	---	---
	12/27/94	NLPH	7.29	7.35	---	---	---	---	---	---	---	---	---	---
	2/6/95	NLPH	5.74	8.90	56	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	6/7/95	NLPH	8.33	6.31	72	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/18/95	NLPH	9.28	5.36	60	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/1/95	NLPH	10.09	4.55	61	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	2/14/96	NLPH	6.26	8.38	83	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	6/19/96	NLPH	6.68	7.96	68	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	<50	---
	9/24/96	NLPH	9.72	4.92	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/11/96	NLPH	8.11	6.53	91	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	3/19/97	NLPH	7.72	6.92	140	<50	<2.5	0.83	<0.5	<0.5	<0.5	---	---	---
	6/4/97	NLPH	8.87	5.77	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/2/97	NLPH	9.44	5.20	140	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/2/97	NLPH	8.43	6.21	71	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	3/24/98	NLPH	5.84	8.80	62	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	6/23/98	NLPH	7.81	6.83	69	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/29/98	NLPH	9.26	5.38	52	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/30/98	NLPH	8.28	6.36	74	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---
3/24/99	NLPH	4.74	9.90	71.1	b	---	---	---	---	---	---	---	---	
6/22/99	Well not sampled	---	---	---	---	---	---	---	---	---	---	---	---	---
9/29/99	NLPH	8.41	6.23	---	---	---	---	---	---	---	---	---	---	---
MW10 (14.05)	1/20/94	NLPH	8.40	5.65	---	---	---	---	---	---	---	---	---	---
	02/02-03/94	NLPH	8.00	6.05	<50	<50	---	<0.5	1	<0.5	1.8	---	---	---
	3/10/94	NLPH	7.56	6.49	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	7.35	6.70	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	7.06	6.99	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Well ID #	Sampling	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG	
(TOC)	Date	<.....>	feet	>	<.....>	ug/l									>
MW10 (cont.) (14.05)	6/27/94	NLPH	7.59	6.46	---	---	---	---	---	---	---	---	---	---	
	8/31/94	NLPH	8.73	5.32	---	---	---	---	---	---	---	---	---	---	
	9/29/94	NLPH	9.07	4.98	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	
	10/25/94	NLPH	9.41	4.64	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	
	11/30/94	---	7.62	6.43	---	---	---	---	---	---	---	---	---	---	
	12/27/94	NLPH	7.01	7.04	---	---	---	---	---	---	---	---	---	---	
	2/6/95	NLPH	5.60	8.45	---	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/7/95	NLPH	7.12	6.93	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	9/18/95	NLPH	8.54	5.51	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	11/1/95	NLPH	9.44	4.61	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	2/14/96	NLPH	9.36	4.69	64	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/19/96	NLPH	7.32	6.73	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	<50	---	
	9/24/96	NLPH	9.07	4.98	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	12/11/96	NLPH	7.73	6.32	67	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	3/19/97	NLPH	7.62	6.43	51	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/4/97	NLPH	8.38	5.67	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	9/2/97	NLPH	8.64	5.41	120	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	12/2/97	NLPH	7.22	6.83	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	3/24/98	NLPH	5.71	8.34	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/23/98	NLPH	7.23	6.82	90	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	9/29/98	NLPH	8.39	5.66	<50	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	12/30/98	NLPH	7.74	6.31	58	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	3/24/99	NLPH	4.74	9.31	<50	<50	<2.0	<0.5	<0.5	<0.5	<0.5	---	---	---	
6/22/99	Well not sampled		---	---	---	---	---	---	---	---	---	---	---	---	
9/29/99	NLPH	8.17	5.88	---	---	---	---	---	---	---	---	---	---	---	
MW11 (13.55)	1/20/94	NLPH	9.61	3.94	---	---	---	---	---	---	---	---	---	---	
	02/02-03/94	NLPH	9.56	3.99	160	<50	---	<0.5	1	<0.5	0.9	---	---	---	
	3/10/94	NLPH	8.59	4.96	---	---	---	---	---	---	---	---	---	---	
	4/22/94	NLPH	8.47	5.08	---	---	---	---	---	---	---	---	---	---	
	05/10-11/94	NLPH	8.12	5.43	1002	<50	---	<0.53	<0.5	<0.5	3.2	---	---	---	
	6/27/94	NLPH	8.65	4.90	---	---	---	---	---	---	---	---	---	---	
	8/31/94	NLPH	9.80	3.75	---	---	---	---	---	---	---	---	---	---	
	9/29/94	NLPH	10.16	3.39	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	
	10/25/94	NLPH	10.48	3.07	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	
	11/30/94	---	8.55	5.00	---	---	---	---	---	---	---	---	---	---	
	12/27/94	NLPH	7.98	5.57	---	---	---	---	---	---	---	---	---	---	
	2/6/95	NLPH	6.49	7.06	160	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/7/95	NLPH	7.98	5.57	50	<50	42	<0.5	<0.5	<0.5	<0.5	---	---	---	
	9/18/95	NLPH	10.12	3.43	56	<50	32	<0.5	<0.5	<0.5	<0.5	---	---	---	
11/1/95	NLPH	10.75	2.80	170	<50	35	<0.5	<0.5	<0.5	<0.5	---	---	---		

TABLE 1
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3006
720 High Street
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Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >	TEPHd <	TPPHg >	MTBE	B	T	E	X	VOCs	EHCss	TOG >	
ug/l															
MW11 (cont.) (13.55)	2/14/96	NLPH	8.03	5.52	76	<50	37	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/19/96	NLPH	7.85	5.70	92	<50	33	<0.5	<0.5	<0.5	<0.5	---	<50	---	
	9/24/96	NLPH	10.45	3.10	58	<50	40	<0.5	<0.5	<0.5	<0.5	---	---	---	
	12/11/96	NLPH	9.02	4.53	110	<50	10	<0.5	<0.5	<0.5	<0.5	---	---	---	
	3/19/97	NLPH	9.16	4.39	100	<50	6.9	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/4/97	NLPH	9.91	3.64	<50	<50	5.6	<0.5	<0.5	<0.5	<0.5	---	---	---	
	9/2/97	NLPH	10.25	3.30	150	<50	4.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	12/2/97	NLPH	9.33	4.22	70	<50	5.8	<0.5	<0.5	<0.5	<0.5	---	---	---	
	3/24/98	NLPH	6.77	6.78	<50	<50	4.1	<0.5	<0.5	<0.5	<0.5	---	---	---	
	6/23/98	NLPH	8.99	4.56	70	<50	<2.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	9/29/98	NLPH	9.89	3.66	76	<50	7.7	<0.5	<0.5	<0.5	<0.5	---	---	---	
	12/30/98	NLPH	9.17	4.38	71	<50	3.5	<0.5	<0.5	<0.5	<0.5	---	---	---	
	3/24/99	NLPH	5.79	7.76	58.2	<50	4.51	<0.5	1.20	<0.5	<0.5	---	---	---	
	6/22/99	Well not sampled		---	---	---	---	---	---	---	---	---	---	---	---
	9/29/99	NLPH	9.14	4.41	---	---	---	---	---	---	---	---	---	---	---
	MW12 (12.61)	1/20/94	NLPH	7.81	4.80	---	---	---	---	---	---	---	---	---	---
02/02-03/94		NLPH	7.22	5.39	18,000	48,000	---	4,000	2,700	2,900	9,900	---	---	---	
3/10/94		NLPH	6.16	6.45	---	---	---	---	---	---	---	---	---	---	
4/22/94		NLPH	6.31	6.30	---	---	---	---	---	---	---	---	---	---	
05/10-11/94		NLPH	6.16	6.45	8,200	46,000	---	30,003	1,600	2,900	9,100	---	---	---	
6/27/94		NLPH	6.55	6.06	---	---	---	---	---	---	---	---	---	---	
8/31/94		NLPH	7.97	4.64	---	---	---	---	---	---	---	---	---	---	
9/29/94		Sheen	8.52	4.09	---	---	---	---	---	---	---	---	---	---	
10/25/94		Sheen	8.74	3.87	---	---	---	---	---	---	---	---	---	---	
11/30/94		---	8.73	3.88	---	---	---	---	---	---	---	---	---	---	
12/30/94		NLPH	6.17	6.44	---	---	---	---	---	---	---	---	---	---	
2/6/95		Sheen	4.44	8.17	---	---	---	---	---	---	---	---	---	---	
6/7/95		Sheen	6.59	6.02	---	---	---	---	---	---	---	---	---	---	
9/18/95		Sheen	8.96	3.65	---	---	---	---	---	---	---	---	---	---	
11/1/95		Sheen	10.75	1.86	---	---	---	---	---	---	---	---	---	---	
2/14/96		Sheen	7.73	4.88	---	---	---	---	---	---	---	---	---	---	
6/19/96		Sheen	5.80	6.81	---	---	---	---	---	---	---	---	---	---	
9/24/96		Sheen	9.14	3.47	---	---	---	---	---	---	---	---	---	---	
12/11/96		Sheen	7.31	5.30	---	---	---	---	---	---	---	---	---	---	
3/19/97		Sheen	9.96	2.65	---	---	---	---	---	---	---	---	---	---	
6/4/97		Sheen	8.81	3.80	---	---	---	---	---	---	---	---	---	---	
9/2/97		Sheen	8.93	3.68	---	---	---	---	---	---	---	---	---	---	
12/2/97	NLPH	8.41	4.20	3,900	45,000	<250	1,800	560	3,100	8,700	---	---	---		
3/24/98	NLPH	5.37	7.24	8,800	42,000	<250	820	280	2,800	6,800	---	---	---		
6/23/98	Sheen	8.43	4.18	7,800	39,000	560	1,000	200	2,300	4,900	---	---	---		
9/29/98	Sheen	8.94	3.67	21,000	40,000	<500	1,100	150	2,200	3,100	---	---	---		
12/30/98	Sheen	8.47	4.14	49,000	79,000	<500	1,400	400	3,300	8,500	---	---	---		

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet.....>	Elev. <.....>	TEPHd <.....>	TPPHg <.....>	MTBE <.....>	B <.....>	T <.....>	E <.....>	X <.....>	VOCs <.....>	EHCss <.....>	TOG <.....>
MW12 (cont.) (12.61)	3/24/99	Sheen	3.71	8.90	5,070	40,600	<20	328	182	1,690	3,930	---	---	---
	6/22/99	Sheen	4.91	7.70	15,000	54,800	109	203	244	1,530	3,790	---	---	---
	9/29/99	NLPH	7.41	5.20	6,830 ⁶	22,900	194	422	72.6	1,790	2,270	---	---	---
MW13 (14.20)	1/20/94	NLPH	9.08	5.12	---	---	---	---	---	---	---	---	---	---
	02/02-03/94	NLPH	8.75	5.45	8,100	41,000	---	3,800	1,500	2,700	9,500	---	---	---
	3/10/94	Sheen	7.46	6.74	---	---	---	---	---	---	---	---	---	---
	4/22/94	Sheen	7.78	6.42	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	7.61	6.59	15,000	39,000	---	3,400	930	2,400	8,900	---	---	---
	6/27/94	NLPH	7.97	6.23	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	9.21	4.99	---	---	---	---	---	---	---	---	---	---
	9/29/94	NLPH	9.61	4.59	320	57,000	---	2,100	470	2,600	8,100	---	---	---
	10/25/94	Sheen	9.93	4.27	---	---	---	---	---	---	---	---	---	---
	11/30/94	---	8.16	6.04	---	---	---	---	---	---	---	---	---	---
	12/27/94	---	7.61	6.59	---	---	---	---	---	---	---	---	---	---
	2/6/95	Sheen	5.89	8.31	---	---	---	---	---	---	---	---	---	---
	6/7/95	Sheen	8.05	6.15	---	---	---	---	---	---	---	---	---	---
	9/18/95	Sheen	9.94	4.26	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	10.48	3.72	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	8.88	5.32	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	7.22	6.98	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	10.27	3.93	---	---	---	---	---	---	---	---	---	---
	12/11/96	Sheen	8.77	5.43	---	---	---	---	---	---	---	---	---	---
	3/19/97	Sheen	9.46	4.74	---	---	---	---	---	---	---	---	---	---
	6/4/97	Sheen	9.59	4.61	---	---	---	---	---	---	---	---	---	---
9/2/97	Sheen	9.68	4.52	---	---	---	---	---	---	---	---	---	---	
12/2/97	NLPH	9.16	5.04	16,000	14,000	<250	210	<50	920	1,000	---	---	---	
3/24/98	NLPH	6.71	7.49	1,700	5,600	55	110	6.0	420	330	---	---	---	
6/23/98	NLPH	8.87	5.33	3,800	12,000	200	120	<20	300	300	---	---	---	
9/29/98	NLPH	9.79	4.41	2,400	4,900	130	130	12.0	410	200	---	---	---	
12/30/98	NLPH	9.03	5.17	2,000	6,700	520	100	11	400	250	---	---	---	
3/24/99	Sheen	4.91	9.29	688	3,730	15.5	35.9	1.58	150	112	---	---	---	
6/22/99	Sheen	5.66	8.54	4,090	7,220	56.4	29.0	<5.0	496	318	---	---	---	
9/29/99	NLPH	8.62	5.58	1,060 ⁶	5,200	103	83.0	5.90	322	126	---	---	---	
MW14 (15.18)	1/20/94	---	---	---	---	---	---	---	---	---	---	---	---	---
	02/02-03/94	Not Accessible	---	---	---	---	---	---	---	---	---	---	---	---
	3/10/94	NLPH	7.84	7.34	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	8.00	7.18	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	7.93	7.25	11,002	300	---	2.7	7.9	2	27	---	---	---
	6/27/94	NLPH	8.19	6.99	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	9.44	5.74	---	---	---	---	---	---	---	---	---	---
9/29/94	NLPH	9.82	5.36	NA	300	1,600	<0.5	<0.5	0.9	1.3	---	---	---	

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet.....>	Elev. <.....>	TEPHd <.....>	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
.....ug/l.....>														
MW15 (cont.) (13.73)	6/4/97	Sheen	8.62	5.11	---	---	---	---	---	---	---	---	---	---
	9/2/97	NLPH	9.04	4.69	480	1,100	23	19	<2.0	11	4.9	---	---	---
	12/2/97	NLPH	8.43	5.30	600	1,700	58	20	<5.0	11	<5.0	---	---	---
	3/24/98	NLPH	6.35	7.38	450	2,100	<100	570	<20	<20	<20	---	---	---
	6/23/98	NLPH	7.79	5.94	570	2,300	<25	440	<5.0	30	<5.0	---	---	---
	9/29/98	Not Accessible	---	---	---	---	---	---	---	---	---	---	---	---
	12/30/98	NLPH	8.42	5.31	510	900	14	6.2	1.5	5.8	3.4	---	---	---
	3/24/99	NLPH	4.69	9.04	346	1,480	12.7	181	1.15	29.8	<1.0	---	---	---
	6/22/99	NLPH	5.42	8.31	558	864	6.49	12.7	<0.5	3.28	1.38	---	---	---
	9/29/99	NLPH	7.08	6.65	306 ^a	316	<5.0	1.44	7.51	1.60	3.21	---	---	---

Notes:

- SUBJ = Results of subjective evaluation, liquid-phase hydrocarbon thickness (HT) in feet.
- NLPH = No liquid-phase hydrocarbons present in well.
- TOC = Elevation of top of well casing; relative to mean sea level.
- DTW = Depth to water.
- Elev. = Elevation of groundwater. If liquid-phase hydrocarbons present, elevation adjusted using TOC - [DTW - (PT x 0.8)].
- [] = amount recovered
- gal. = gallons
- TEPHd = Total extractable petroleum hydrocarbons as diesel analyzed using EPA method 3510/8015 (modified).
- TPPHg = Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA method 5030/8015 (modified).
- MTBE = Methyl tertiary butyl ether analyzed using EPA method 5030/8020.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA method 5030/8020.
- VOCs = Volatile organic compounds/purgeable halocarbons analyzed using EPA method 601.
- TOG = Total oil and grease analyzed using Standard Method 5520.
- EHCss = Extractable Hydrocarbons as Stoddard Solvent analyzed using EPA method 8015.
- = Not measured/not analyzed.
- < = Less than the indicated detection limit shown by the laboratory.
- * = TEPH note: Analyst notes samples resemble paint thinner more than Stoddard Solvent.
- a = A peak eluting earlier than benzene and suspected to be methyl tertiary butyl ether was present.
- b = Sample containers for TPHg, BTEX, and MTBE were broken in transit.
- c = Chromatogram pattern: unidentified hydrocarbons C6 - C12.
- d = Chromatogram pattern: weathered gasoline C6 - C12.
- e = Chromatogram pattern: weathered gasoline C6 - C12 and unidentified hydrocarbons C6 - C12.
- f = Chromatogram pattern: weathered diesel C9 - C24 and unidentified hydrocarbons C9 - C36.
- g = Chromatogram pattern: unidentified hydrocarbons C9 - C24.

TABLE 2
CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
SOIL VAPOR EXTRACTION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California
(Page 1 of 7)

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
1/9/95	A-INF	70		160			210			39			
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			
1/10/95	A-INF	70		160			110	2.30	2.3	22	0.438	0.44	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/11/95	A-INF	70		160			70	1.29	3.6	12	0.244	0.68	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/12/95	A-INF	70		160			< 10	< 0.57	4.2	< 0.1	< 0.087	< 0.77	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/13/95	A-INF	70		160			< 10	< 0.14	4.3	< 0.1	< 0.001	< 0.77	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/14/95	A-INF	70		160			< 10	< 0.14	4.5	< 0.1	< 0.001	< 0.77	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/15/95	A-INF	70		158			< 10	< 0.14	4.6	< 0.1	< 0.001	< 0.77	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/16/95	A-INF	70		151			< 10	< 0.14	4.7	< 0.1	< 0.001	< 0.77	
	A-INT						10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/17/95	A-INF	70		155			< 10	< 0.14	4.9	0.13	0.002	< 0.78	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/18/95	A-INF	70		155			100	0.77	5.6	12	0.084	< 0.86	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/19/95		70		155	15	0	68	1.17	6.8				
1/20/95		70		155	14.4	0	66	0.93	7.7				
2/1/95	A-INF	70		147			39	13.19	20.9	3.5	1.471	< 2.33	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0013
2/14/95		70		147									
2/17/95		70		155	9	0	41	8.67	29.6				
2/27/95		70		151									
3/13/95	A-INF	70		176			< 10	< 14.21	43.8	0.42	1.137	< 3.47	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0016
3/31/95		70		116	2.3	0	10	2.01	45.8				
4/4/95		70		84	129	0.8	587	76.68	122.5				
4/12/95	A-INF	70		176			95	24.88	147.4	6.4	1.616	< 5.08	
	A-INT						< 10			0.38			
	A-EFF						< 10			< 0.1			< 0.0016
4/19/95	A-INF	70		109			210	13.65	161.0	7.6	0.627	< 5.71	
	A-INT						47			12			
	A-EFF						< 10			< 0.1			< 0.0010
4/20/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of Carbon												

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

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
4/26/95	A-INF	70		84			400	18.49	179.5	9.1	0.640	< 6.35	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0008
5/1/95	Installed third 500 lb canister in series												
5/1/95	A-INF	70		168			Insufficient sample for analyses						
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0015
5/15/95		70		84									
5/19/95	A-INF	70		105			140	52.68	232.2	3.5	1.229	< 7.58	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0009
6/6/95	A-INF	70		178			36	20.12	252.3	0.22	0.535	< 8.11	
	A-INT						< 10			0.1			
	A-EFF						< 10			< 0.1			< 0.0016
6/8/95		70		164									
6/23/95	System Down - hydrocarbon vapor detector shut down												
6/27/95	Replaced one 500 lb carbon canister - restarted system												
6/27/95	A-INF	70		164			440	62.10	314.4	4.9	0.668	< 8.78	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0015
7/3/95	A-EFF						< 10			< 0.1			
7/10/95	Replaced one 500 lb carbon canister												
7/10/95	A-INF	70		168			230	64.89	379.3	2.8	0.746	< 9.53	
	A-INT						120			2.8			
	A-EFF						< 10			< 0.1			< 0.0015
7/19/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of Carbon												
7/25/95	Collect samples and shut system down pending results												
7/25/95	A-INF	70		205			67	37.29	416.6	< 0.5	< 0.414	< 9.94	
	A-INT						< 100			< 1			
	A-EFF						< 10			< 0.1			< 0.0018
7/28/95	System down - could not restart												
7/31/95	Restart system												
7/31/95	A-INF	70		164			500	18.78	435.4	14	< 0.480	< 10.42	
	A-INT						12			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0015
8/9/95	Replaced one 500 lb carbon canister												
8/15/95	System down - Remove hydrocarbon vapor detector and send to manufacture for calibration												
9/11/95	Replaced hydrocarbon vapor detector - Restarted system												
9/13/95	System Down - hydrocarbon vapor detector shut down												
9/18/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of carbon												
9/18/95	A-INF	70		164			980	196.08	631.5	13	3.577	< 14.00	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0015
9/20/95	System Down - hydrocarbon vapor detector shut down												
9/25/95	Restarted system												
9/25/95	A-INF	70		164			NA						
	A-INT						NA			< 0.1			
	A-EFF						NA			< 0.1			
10/13/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of carbon												

TABLE 2
CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
SOIL VAPOR EXTRACTION SYSTEM
Former Exxon Service Station 7-3006
720 High Street
Oakland, California
(Page 3 of 7)

DATE	SAMPLE ID	TEMP deg F	PRESS in H ₂ O	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
10/13/95	A-INF	70		168			2000	444.04	1,075.5	100	16.838	< 30.84	
	A-INT						< 10			< 0.05			
	A-EFF						< 10			< 0.05			< 0.0008
10/26/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of carbon												
10/26/95		70		168	165	0	751	269.69	1,345.2				
11/6/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of carbon												
11/20/95	A-INF1	70		170			180	176.60	1,521.8	3.6	1.038	< 31.88	
	A-INF2						82			2			
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0015
11/26/95	System down												
12/4/95	Restart system	70		168	18.5	0.5	84	12.03	1,533.8				
12/18/95	A-INF	70		151			4600	469.45	2,003.3	50	10.105	< 41.98	
	A-INT						< 10			< 0.1			
	A-EFF						< 10			< 0.1			< 0.0014
1/2/96		70		147	51.7	8.2	235	485.04	2,488.3				
1/3/96	Shut system down, pending carbon change out												
1/8/96	changed out three carbon beds, #1, #2, # three carbon beds in-line												
1/8/96		70		151.2	105.4	0	480	28.72	2,517.0				
1/16/96	A-INF	70		142.8	62.3	0	180	7.50	2,524.5	< 0.1	< 0.000	< 41.98	
	A-EFF									< 0.1			< 0.0013
1/30/96		70		147	50.4	0	230	37.28	2,561.8				
2/14/96	A-INF	72		147	39.7	0	< 10	< 0.49	2,562.3	0.16	0.049	< 42.03	
	A-EFF						< 10			< 0.1			< 0.0013
2/27/96		70		136.5	1	0	5	1.20	2,563.5				
3/12/96	A-INF	70		136.5	2.2	0	< 10	< 1.25	2,564.8	< 0.1	< 0.045	< 42.07	
	A-EFF						< 10			< 0.1			< 0.0012
3/23/96	A-INF	70		147	2.4	0	< 10	< 1.65	2,566.4	< 0.1	< 0.017	< 42.09	
	A-EFF						< 10			< 0.1			< 0.0013
3/23/96	System shutdown to install Thermttech VAC-25 thermal/catalytic oxidizer												
8/3/96	Start-up system utilizing Thermttech VAC-25 thermal/catalytic oxidizer												
8/15/96	A-INF			110			410			4.7			
	A-EFF						< 10			< 0.05			< 0.0005
8/29/96				176	45.8	1.1	194	54.26	2,620.7				
9/6/96	A-INF			176			150	21.73	2,642.4	< 0.1	< 0.678	< 42.77	
	A-EFF						< 10			< 0.1			< 0.0016
9/9/96				176	96	4.4	406	13.18	2,655.6				
9/24/96				184.8	141	5.1	597	121.82	2,777.4				
10/3/96	A-INF			176			1300	138.22	2,915.6	< 1	< 0.235	< 43.00	
	A-EFF						< 10			< 0.1			< 0.0016
10/9/96				176	173	4.5	732	96.31	3,011.9				
10/14/96				184.8	105	4.4	444	47.63	3,059.6				
10/21/96				176	89.2	4.5	378	46.58	3,106.1				
10/30/96				176	58.3	0.7	247	44.38	3,150.5				
11/6/96	System down, unable to restart due to reset failure												
1/17/97	Replaced Thermalcouple, restarted unit												
1/31/97	A-INF			44			< 10	0.55	3,151.1	0.14	0.008	< 43.01	
	A-EFF						< 10			< 0.05			< 0.0002
2/6/97	A-INF			176			86	2.84	3,153.9	2.2	0.069	< 43.08	
	A-EFF						< 10			< 0.10			< 0.0016
2/14/97				176	25	2	106	12.12	3,166.0				

TABLE 2
 CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
 SOIL VAPOR EXTRACTION SYSTEM
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 5 of 7)

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
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	345.54	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
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 combustion 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							

TABLE 2
CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
SOIL VAPOR EXTRACTION SYSTEM

Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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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
4/28/99	A-INF A-EFF			123.2	10.1	0							
5/4/99	A-INF A-EFF			132	0	0							
5/13/99	A-INF A-EFF			176	1.3	0	< 10 < 10	< 3.84	5,136.1	< 0.1 < 0.1	< 0.038	< 61.28	< 0.0016
5/18/99	A-INF A-EFF			176	1.3	0							
5/25/99	A-INF A-EFF			167.2	0	0							
6/11/99	System down upon arrival, emergency stop button was activated.												
6/11/99	A-INF A-EFF			167.2	4.9	4.5							
6/17/99	System operated for 24.3 day for removal calculations.												
6/17/99	A-INF A-EFF			167.2	1.3	1	< 10 < 10	< 3.74	5,139.9	< 0.1 < 0.1	< 0.037	< 61.32	< 0.0015
6/17/99	System shut down for pulsing												
6/25/99	System restarted												
6/25/99	A-INF A-EFF			176	3.3	0							
6/29/99	A-INF A-EFF			176	2.9	0							
7/6/99	A-INF A-EFF			123.2	0	0	< 10 < 10	< 1.43	5,141.3	< 0.1 < 0.1	< 0.014	< 61.33	< 0.0011
7/16/99	A-INF A-EFF			158.4	1.6	0.3							
7/16/99	System shut down for pulsing												
7/22/99	System restarted												
7/22/99	A-INF A-EFF			176	0	0.7							
7/28/99	A-INF A-EFF			167.2	5.4	0	15.5 < 10	< 2.66	5,143.9	< 0.1 < 0.1	< 0.018	< 61.35	< 0.0015
7/28/99	System Shut down.												

Notes:

A-INF	= Air Influent	HC	= Hydrocarbons measured as total purgeable petroleum hydrocarbons as gasoline analyzed 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

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Analytical Data													
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg Removed						Benzene Removed			
				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]
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

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Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	Analytical Data						TPHg Removed		Benzene Removed	
				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]
				4/19/95	73,710	2,930	W-INF	400	47	5.4	<0.5	40	NA
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0055				
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										

**TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM**

Former Exxon Service Station 7-3006

720 High Street

Oakland, California

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Date	Analytical Data									TPHg Removed		Benzene Removed	
	Total Flow	Average Flowrate	Sample 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]
7/11/95	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				
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											

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Analytical Data													
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg						TPHg Removed		Benzene Removed	
				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]
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												
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				

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006

720 High Street

Oakland, California

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Analytical Data													
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg						TPHg Removed		Benzene Removed	
				[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	Arsenic [mg/l]	Per Period [lb]	Cumulative [lb]	Per Period [lb]
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												
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										

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
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Analytical Data													
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg						TPHg Removed		Benzene Removed	
				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]
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				
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										

**TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM**

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
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Analytical Data													
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg						TPHg Removed		Benzene Removed	
				[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]
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				
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				

**TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM**

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
(Page 8 of 12)

Date	Analytical Data												
	Total Flow	Average Flowrate	Sample ID	TPHg						TPHg Removed		Benzene Removed	
	[gal]	[gpd]		[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]
9/17/97	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											
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				

**TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM**

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
(Page 10 of 12)

Analytical Data													
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg Removed						Benzene Removed			
				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]
5/28/98	628,580	829											
6/2/98	634,760	1,236	Samples were collected but inadvertently not analyzed by the laboratory.										
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				

TABLE 3
 OPERATION AND PERFORMANCE DATA FOR
 GROUNDWATER REMEDIATION SYSTEM
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 11 of 12)

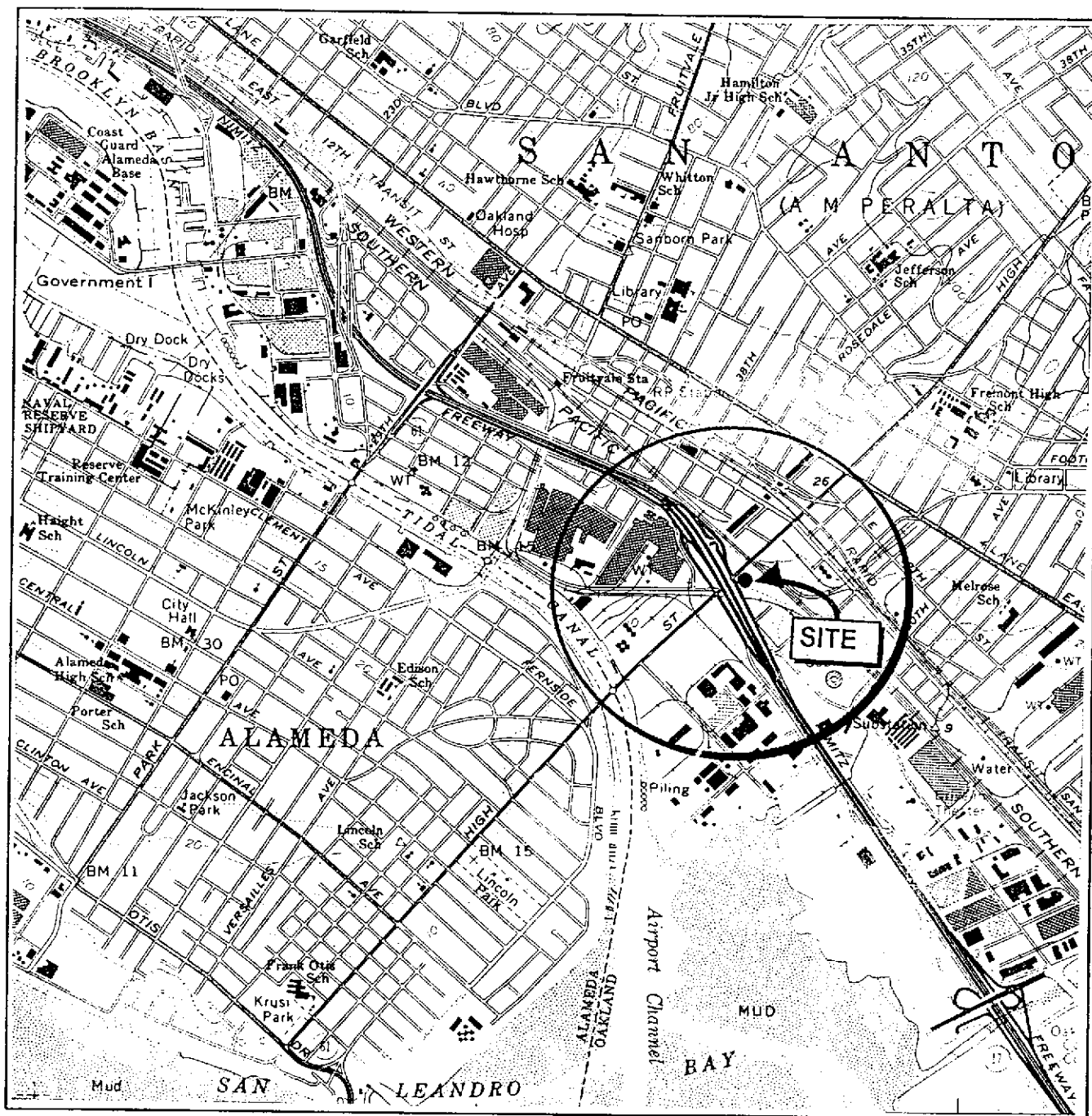
Date	Analytical Data												
	Total Flow	Average Flowrate	Sample ID	TPHg	B	T	E	X	Arsenic	TPHg Removed		Benzene Removed	
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	Per Period [lb]	Cumulative [lb]	Per Period [lb]	Cumulative [lb]
9/8/98	System down upon arrival due to a failed sump pump. System was restarted.												
9/8/98	669,720	404											
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				

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
(Page 12 of 12)

Date	Analytical Data												
	Total Flow	Average Flowrate	Sample ID	TPH _g						TPH _g Removed		Benzene Removed	
	[gal]	[gpd]		[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]
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.										
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.										
5/4/99	702,994		System down for the month of May. No Permit renewal from EBMUD.										
6/11/99	702,994		System down for the month of June. No Permit renewal from EBMUD.										
7/28/99	702,994		System shutdown pending closure.										

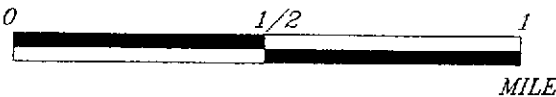
W-INF1	= water influent before stripper or before tank	B	= Benzene	NA	= Not applicable
W-INF2	= water influent after stripper or after filters	T	= Toluene	NS	= Not sampled
W-INT	= water intermediate samples	E	= Ethylbenzene		
W-EFF	= water effluent samples	X	= Total Xylenes		
TPPH _g	= Total purgeable 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		



FN 20100001



APPROXIMATE SCALE



SOURCE: U.S.G.S. 7.5 minute topographic quadrangle map Oakland East, California (Photorevised 1990)



PROJECT ERI 2010

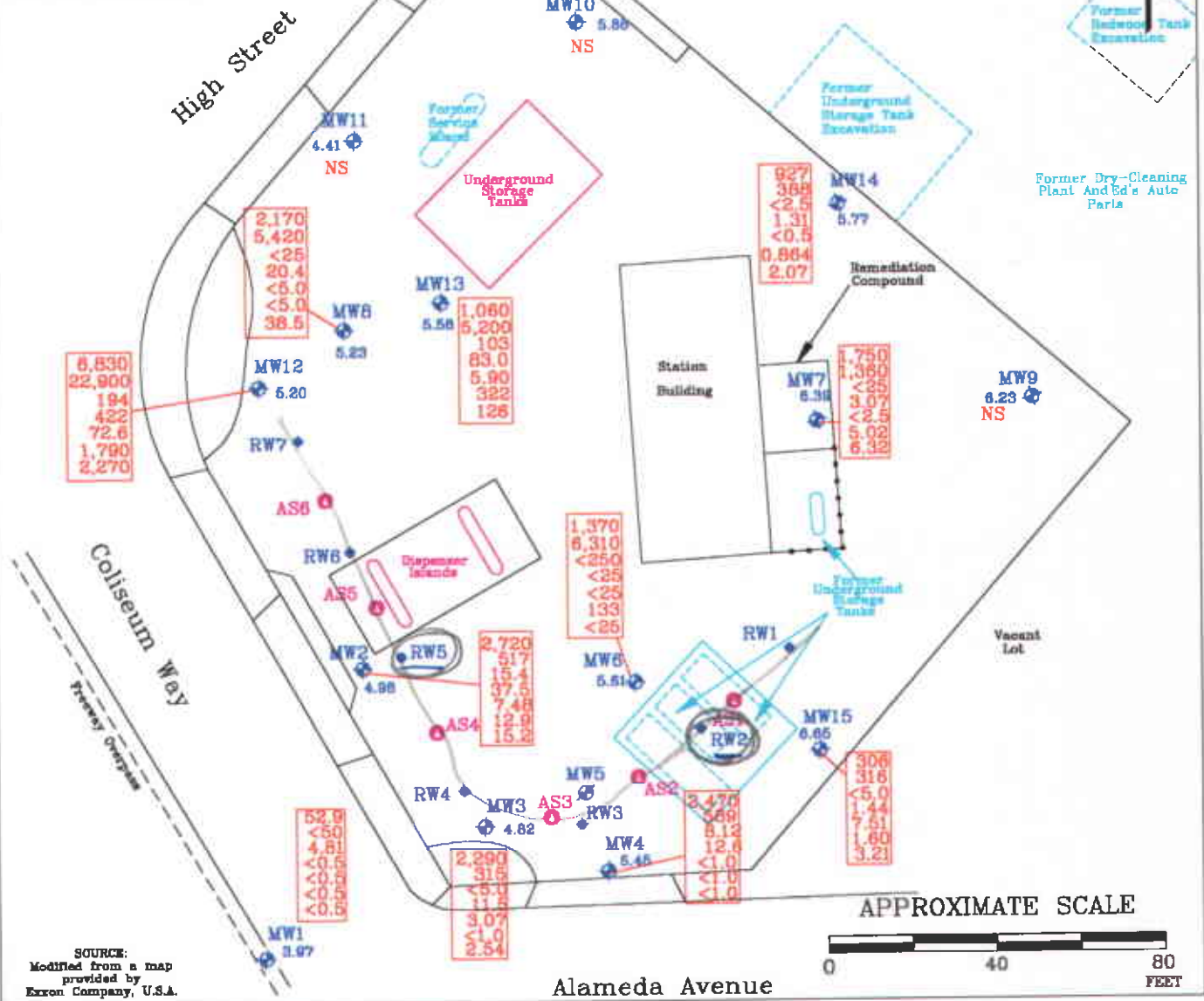
SITE VICINITY MAP

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

PLATE

1

Groundwater gradient and flow direction are not calculated due to recent remedial activities. The remediation system was shut down 7/25/98. Groundwater gradient and flow direction will be calculated after sufficient time has passed to allow water levels to equilibrate.



FN 20100002

EXPLANATION

- MW15 Groundwater Monitoring Well
- 6.65 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 September 29, 1999

- 6,830 Total Extractable Petroleum Hydrocarbons as diesel
- 22,900 Total Purgeable Petroleum Hydrocarbons as gasoline
- 194 Methyl Tertiary Butyl Ether
- 422 Benzene
- 72.6 Toluene
- 1,790 Ethylbenzene
- 2,270 Total Xylenes
- < Less Than the Stated Laboratory Detection Limit
- ug/L Micrograms per Liter
- NS Not Sampled
- NW Not Measured



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

PROJECT NO.
2010
PLATE
2
October 19, 1999

ATTACHMENT A
GROUNDWATER SAMPLING PROTOCOL

BLAINE TECH SERVICES, INC. METHODS AND PROCEDURES FOR THE ROUTINE MONITORING OF GROUNDWATER WELLS AT EXXON STATIONS

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. We specialize in groundwater monitoring assignments and intentionally limit the scope of our services to those centered on the generation of objective information.

To avoid conflicts of interest, Blaine Tech Services, Inc. personnel do not evaluate or interpret the information we collect. As a state licensed contractor (C-57 well drilling –water – 746684) performing strictly technical services, we do not make any professional recommendations and perform no consulting of any kind.

SAMPLING PROCEDURES OVERVIEW

SAFETY

All groundwater monitoring assignments performed for Exxon comply with Exxon's safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians receive the full 40 hour 29CFR 1910.120 OSHA SARA HAZWOPER course, medical clearance and on-the-job training prior to commencing any work on any Exxon site.

INSPECTION AND GAUGING

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic sounders which are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of Immiscibles or sheen and when free product is suspected, it is confirmed using an electronic interface probe (e.g. MMC). If sheen or product is found in a well, the Project Coordinator notifies the appropriate party (e.g. Exxon employee or consultant).

No samples are collected from a well containing sheen or product.

EVACUATION

Depth to water measurements are collected by our personnel prior to purging and minimum purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and

are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well. Small volumes of purgewater are often removed by hand bailing with a disposable bailer.

PARAMETER STABILIZATION

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 of a pH unit.

DEWATERED WELLS

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewateres and does not recharge.

Wells known to dewater are evacuated as early as possible during each site visit in order to allow for the greatest amount of recovering. Any well that does not recharge to 80% of its original volume will be sampled prior to the departure of our personnel from the site in order to eliminate the need of a return visit.

In jurisdictions where a certain percentage of recovery is included in the local completion standard, our personnel follow the regulatory expectation.

PURGEWATER CONTAINMENT

All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non hazardous purgewater is transported under standard Bill of Lading documentation to a Blaine Tech Services, Inc. facility before being transported to an Exxon approved disposal facility (e.g. Romac Environmental Technologies Corporation in East Palo Alto, California).

SAMPLE COLLECTION DEVICES

All samples are collected using a disposable bailer.

SAMPLE CONTAINERS

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory which will analyze the samples. The transfer of sample material from the bailer to the sample container conforms to specifications contained in the USEPA T.E.G.D. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

TRIP BLANKS

A Trip Blank is carried to each site and is kept inside the cooler for the duration of the sampling event. It is turned over to the laboratory for analysis with the samples from that site.

SAMPLE STORAGE

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the analytical laboratory that will perform the intended analytical procedures. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

DOCUMENTATION CONVENTIONS

Each and every sample container has a label affixed to it. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the station number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time at which the sample was collected and the initials of the person collecting the sample are handwritten onto the label.

Chain of Custody records are created using client specific preprinted forms following USEPA specifications.

Bill of Lading records are contemporaneous records created in the field at the site where the non-hazardous purgewater is generated. Field Technicians use preprinted Bill of Lading forms.

DECONTAMINATION

All equipment is brought to the site in clean and serviceable condition and is cleaned after use in each well and before subsequent use in any other well. Equipment is decontaminated before

leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is de-tuned to function as a hot pressure washer which is then operated with high quality deionized water which is produced at our facility and stored onboard our sampling vehicle. Cleaning is facilitated by the use of proprietary fixtures and devices included in the patented workstation (U.S. Patent 5,535,775) that is incorporated in each sampling vehicle. The steam cleaner is used to decon reels, pumps and bailers.

Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, sounder etc.) that cannot be washed using the hot high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

EXAMPLE: The sounder is cleaned between wells using the non-phosphate soap and deionized water solution followed by deionized water rinses. The sounder is then washed with the steam cleaner between sites or as necessitated by use in a particularly contaminated well.

DISSOLVED OXYGEN READINGS

All Dissolved Oxygen readings are taken using YSI meters (e.g. YSI Model 58 or equivalent YSI meter). These meters are equipped with a YSI stirring device that enables them to collect accurate in-situ readings. The probe/stirring devices are modified to allow downhole measurements to be taken from wells as small as two-inch diameter.

The probe and reel is decontaminated between wells as described above. The meter is calibrated between wells as per the instructions in the operating manual. The probe and stirrer is lowered into the water column allowed to stabilize before use.

OXYIDATON REDUCTION POTENTIAL READINGS

All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter GP). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual. In use the probe is placed in a cup of freshly obtained monitoring well water and allowed to stabilize.

ATTACHMENT B

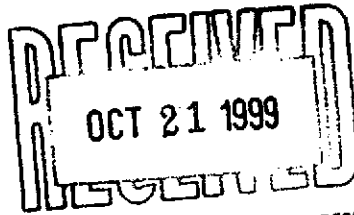
**LABORATORY ANALYSIS REPORTS
AND CHAIN OF CUSTODY RECORDS**



Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308

October 18, 1999



Peter Petro
Environmental Resolutions (Exxon)
73 Digital Drive, Suite 100
Novato, CA 94949

RE: Exxon 7-3006/M909ACD

Dear Peter Petro

Enclosed are the results of analyses for sample(s) received by the laboratory on September 30, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Project Manager

CA ELAP Certificate Number 1210





Environmental Resolutions (Exxon)
73 Digital Drive, Suite 100
Novato, CA 94949

Project: Exxon
Project Number: 7-3006
Project Manager: Peter Petro

Sampled: 9/29/99
Received: 9/30/99
Reported: 10/18/99

ANALYTICAL REPORT FOR M909ACD

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	M909ACD-01	Water	9/29/99
MW-2	M909ACD-02	Water	9/29/99
MW-3	M909ACD-03	Water	9/29/99
MW-4	M909ACD-04	Water	9/29/99
MW-6	M909ACD-05	Water	9/29/99
MW-7	M909ACD-06	Water	9/29/99
MW-8	M909ACD-07	Water	9/29/99
MW-12	M909ACD-08	Water	9/29/99
MW-13	M909ACD-09	Water	9/29/99
MW-14	M909ACD-10	Water	9/29/99
MW-15	M909ACD-11	Water	9/29/99
B	M909ACD-12	Water	9/29/99





Environmental Resolutions (Exxon) 73 Digital Drive, Suite 100 Novato, CA 94949	Project: Exxon Project Number: 7-3006 Project Manager: Peter Petro	Sampled: 9/29/99 Received: 9/30/99 Reported: 10/18/99
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-1								
				<u>M909ACD-01</u>			<u>Water</u>	
Purgeable Hydrocarbons	9100184	10/7/99	10/7/99		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	"	"	"		2.50	4.81	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		92.1	%	
MW-2								
				<u>M909ACD-02</u>			<u>Water</u>	
Purgeable Hydrocarbons	9100184	10/7/99	10/7/99		250	517	ug/l	1
Benzene	"	"	"		2.50	37.5	"	
Toluene	"	"	"		2.50	7.48	"	
Ethylbenzene	"	"	"		2.50	12.9	"	
Xylenes (total)	"	"	"		2.50	15.2	"	
Methyl tert-butyl ether	"	"	"		12.5	15.4	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		83.8	%	
MW-3								
				<u>M909ACD-03</u>			<u>Water</u>	
Purgeable Hydrocarbons	9100184	10/7/99	10/7/99		100	315	ug/l	1
Benzene	"	"	"		1.00	11.5	"	
Toluene	"	"	"		1.00	3.07	"	
Ethylbenzene	"	"	"		1.00	ND	"	
Xylenes (total)	"	"	"		1.00	2.54	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		79.5	%	
MW-4								
				<u>M909ACD-04</u>			<u>Water</u>	
Purgeable Hydrocarbons	9100183	10/7/99	10/7/99		100	589	ug/l	2
Benzene	"	"	"		1.00	12.6	"	
Toluene	"	"	"		1.00	ND	"	
Ethylbenzene	"	"	"		1.00	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Methyl tert-butyl ether	"	"	"		5.00	8.12	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		90.0	%	
MW-6								
				<u>M909ACD-05</u>			<u>Water</u>	
Purgeable Hydrocarbons	9100222	10/8/99	10/8/99		2500	6310	ug/l	3
Benzene	"	"	"		25.0	ND	"	
Toluene	"	"	"		25.0	ND	"	
Ethylbenzene	"	"	"		25.0	133	"	
Xylenes (total)	"	"	"		25.0	ND	"	





Environmental Resolutions (Exxon)
73 Digital Drive, Suite 100
Novato, CA 94949

Project: Exxon
Project Number: 7-3006
Project Manager: Peter Petro

Sampled: 9/29/99
Received: 9/30/99
Reported: 10/18/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Morgan Hill

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-6 (continued)				M909ACD-05			Water	
Methyl tert-butyl ether	9100222	10/8/99	10/7/99		250	ND	ug/l	
Surrogate: a,a,a-Trifluorotoluene	"	"	10/8/99	70.0-130		113	%	
MW-7				M909ACD-06			Water	
Purgeable Hydrocarbons	9100222	10/8/99	10/8/99		250	1360	ug/l	4
Benzene	"	"	"		2.50	3.07	"	
Toluene	"	"	"		2.50	ND	"	
Ethylbenzene	"	"	"		2.50	5.02	"	
Xylenes (total)	"	"	"		2.50	6.32	"	
Methyl tert-butyl ether	"	"	10/7/99		25.0	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	10/8/99	70.0-130		105	%	
MW-8				M909ACD-07			Water	
Purgeable Hydrocarbons	9100222	10/8/99	10/8/99		500	5420	ug/l	1
Benzene	"	"	"		5.00	20.4	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	ND	"	
Xylenes (total)	"	"	"		5.00	38.5	"	
Methyl tert-butyl ether	"	"	10/7/99		25.0	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	10/8/99	70.0-130		104	%	
MW-12				M909ACD-08			Water	
Purgeable Hydrocarbons	9100489	10/15/99	10/15/99		2000	22900	ug/l	1
Benzene	"	"	"		20.0	422	"	
Toluene	"	"	"		20.0	72.6	"	
Ethylbenzene	"	"	"		20.0	1790	"	
Xylenes (total)	"	"	"		20.0	2270	"	
Methyl tert-butyl ether	"	"	"		100	194	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		163	%	5
MW-13				M909ACD-09			Water	
Purgeable Hydrocarbons	9100146	10/6/99	10/6/99		500	5200	ug/l	1
Benzene	"	"	"		5.00	83.0	"	
Toluene	"	"	"		5.00	5.90	"	
Ethylbenzene	"	"	"		5.00	322	"	
Xylenes (total)	"	"	"		5.00	126	"	
Methyl tert-butyl ether	"	"	"		25.0	103	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		96.0	%	
MW-14				M909ACD-10			Water	
Purgeable Hydrocarbons	9100146	10/6/99	10/6/99		50.0	388	ug/l	1

Sequoia Analytical - Morgan Hill

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





Environmental Resolutions (Exxon)
73 Digital Drive, Suite 100
Novato, CA 94949

Project: Exxon
Project Number: 7-3006
Project Manager: Peter Petro

Sampled: 9/29/99
Received: 9/30/99
Reported: 10/18/99

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-14 (continued)				M909ACD-10			Water	
Benzene	9100146	10/6/99	10/6/99		0.500	1.31	ug/l	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	0.864	"	
Xylenes (total)	"	"	"		0.500	2.07	"	
Methyl tert-butyl ether	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		114	%	
MW-15				M909ACD-11			Water	
Purgeable Hydrocarbons	9100184	10/7/99	10/7/99		100	316	ug/l	1
Benzene	"	"	"		1.00	1.44	"	
Toluene	"	"	"		1.00	7.51	"	
Ethylbenzene	"	"	"		1.00	1.60	"	
Xylenes (total)	"	"	"		1.00	3.21	"	
Methyl tert-butyl ether	"	"	"		5.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		98.0	%	
TB				M909ACD-12			Water	
Purgeable Hydrocarbons	9100146	10/6/99	10/6/99		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	"	"	"		2.50	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	70.0-130		97.0	%	





Environmental Resolutions (Exxon)
73 Digital Drive, Suite 100
Novato, CA 94949

Project: Exxon
Project Number: 7-3006
Project Manager: Peter Petro

Sampled: 9/29/99
Received: 9/30/99
Reported: 10/18/99

Diesel Hydrocarbons (C9-C24) by DHS LUFT Sequoia Analytical - Morgan Hill

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-1 Diesel Range Hydrocarbons	9100138	10/5/99	10/8/99	<u>M909ACD-01</u>	50.0	52.9	Water ug/l	
Surrogate: n-Pentacosane	"	"	"	50.0-150		121	%	
MW-2 Diesel Range Hydrocarbons	9100138	10/5/99	10/8/99	<u>M909ACD-02</u>	50.0	2720	Water ug/l	6
Surrogate: n-Pentacosane	"	"	"	50.0-150		95.5	%	
MW-3 Diesel Range Hydrocarbons	9100138	10/5/99	10/8/99	<u>M909ACD-03</u>	50.0	2290	Water ug/l	6
Surrogate: n-Pentacosane	"	"	"	50.0-150		99.9	%	
MW-4 Diesel Range Hydrocarbons	9100191	10/7/99	10/12/99	<u>M909ACD-04</u>	50.0	2470	Water ug/l	7
Surrogate: n-Pentacosane	"	"	"	50.0-150		104	%	
MW-6 Diesel Range Hydrocarbons	9100138	10/5/99	10/9/99	<u>M909ACD-05</u>	50.0	1370	Water ug/l	7
Surrogate: n-Pentacosane	"	"	"	50.0-150		86.5	%	
MW-7 Diesel Range Hydrocarbons	9100138	10/5/99	10/9/99	<u>M909ACD-06</u>	50.0	1750	Water ug/l	7
Surrogate: n-Pentacosane	"	"	"	50.0-150		108	%	
MW-8 Diesel Range Hydrocarbons	9100138	10/5/99	10/9/99	<u>M909ACD-07</u>	50.0	2170	Water ug/l	7
Surrogate: n-Pentacosane	"	"	"	50.0-150		89.8	%	
MW-12 Diesel Range Hydrocarbons	9100138	10/5/99	10/11/99	<u>M909ACD-08</u>	250	6830	Water ug/l	7
Surrogate: n-Pentacosane	"	"	"	50.0-150		94.0	%	
MW-13 Diesel Range Hydrocarbons	9100138	10/5/99	10/9/99	<u>M909ACD-09</u>	50.0	1060	Water ug/l	7
Surrogate: n-Pentacosane	"	"	"	50.0-150		73.5	%	
MW-14 Diesel Range Hydrocarbons	9100191	10/7/99	10/12/99	<u>M909ACD-10</u>	50.0	927	Water ug/l	7
Surrogate: n-Pentacosane	"	"	"	50.0-150		124	%	
MW-15 Diesel Range Hydrocarbons	9100191	10/7/99	10/12/99	<u>M909ACD-11</u>	50.0	306	Water ug/l	7





Environmental Resolutions (Exxon) 73 Digital Drive, Suite 100 Novato, CA 94949	Project: Exxon Project Number: 7-3006 Project Manager: Peter Petro	Sampled: 9/29/99 Received: 9/30/99 Reported: 10/18/99
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**Diesel Hydrocarbons (C9-C24) by DHS LUFT
Sequoia Analytical - Morgan Hill**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-15 (continued)				M909ACD-11			Water	
Surrogate: <i>n</i> -Pentacosane	9100191	10/7/99	10/12/99	50.0-150		105	%	





Environmental Resolutions (Exxon)
73 Digital Drive, Suite 100
Novato, CA 94949

Project: Exxon
Project Number: 7-3006
Project Manager: Peter Petro

Sampled: 9/29/99
Received: 9/30/99
Reported: 10/18/99

Total Detectable Hydrocarbons (C6-C12) BTEX and MTBE by DHS LUPP/Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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Batch: 9100146

Date Prepared: 10/6/99

Extraction Method: EPA 5030B [P/T]

Blank

9100146-BLK1

Purgeable Hydrocarbons	10/6/99			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	"	2.50				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.70	"	70.0-130	97.0			

LCS

9100146-BS1

Benzene	10/6/99	10.0		9.10	ug/l	70.0-130	91.0			
Toluene	"	10.0		8.60	"	70.0-130	86.0			
Ethylbenzene	"	10.0		8.90	"	70.0-130	89.0			
Xylenes (total)	"	30.0		26.4	"	70.0-130	88.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.2	"	70.0-130	102			

Matrix Spike

9100146-MS1

M909960-05

Benzene	10/6/99	10.0	ND	9.10	ug/l	60.0-140	91.0			
Toluene	"	10.0	ND	8.60	"	60.0-140	86.0			
Ethylbenzene	"	10.0	ND	8.90	"	60.0-140	89.0			
Xylenes (total)	"	30.0	ND	26.4	"	60.0-140	88.0			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.60	"	70.0-130	96.0			

Matrix Spike Dup

9100146-MSD1

M909960-05

Benzene	10/6/99	10.0	ND	8.80	ug/l	60.0-140	88.0	25.0	3.35	
Toluene	"	10.0	ND	8.26	"	60.0-140	82.6	25.0	4.03	
Ethylbenzene	"	10.0	ND	8.38	"	60.0-140	83.8	25.0	6.02	
Xylenes (total)	"	30.0	ND	25.4	"	60.0-140	84.7	25.0	3.82	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.80	"	70.0-130	98.0			

Batch: 9100183

Date Prepared: 10/7/99

Extraction Method: EPA 5030B [P/T]

Blank

9100183-BLK1

Purgeable Hydrocarbons	10/7/99			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	"	2.50				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.87	"	70.0-130	98.7			





Environmental Resolutions (Exxon) 73 Digital Drive, Suite 100 Novato, CA 94949	Project: Exxon Project Number: 7-3006 Project Manager: Peter Petro	Sampled: 9/29/99 Received: 9/30/99 Reported: 10/18/99
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Total Purgeable Hydrocarbons (C6-12) BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical, Morgan Hill, CA

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS 9100183-BS1										
Purgeable Hydrocarbons	10/7/99	250		226	ug/l	70.0-130	90.4			
Benzene	"			3.37	"	70.0-130				
Toluene	"			15.6	"	70.0-130				
Ethylbenzene	"			3.83	"	70.0-130				
Xylenes (total)	"			18.7	"	70.0-130				
Methyl tert-butyl ether	"			8.60	"	70.0-130				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		11.6	"	70.0-130	116			
Matrix Spike 9100183-MS1 M910055-07										
Purgeable Hydrocarbons	10/7/99	250	ND	248	ug/l	60.0-140	99.2			
Benzene	"		ND	3.44	"	60.0-140				
Toluene	"		ND	15.3	"	60.0-140				
Ethylbenzene	"		ND	3.76	"	60.0-140				
Xylenes (total)	"		ND	18.3	"	60.0-140				
Methyl tert-butyl ether	"		ND	8.80	"	60.0-140				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.8	"	70.0-130	108			
Matrix Spike Dup 9100183-MSD1 M910055-07										
Purgeable Hydrocarbons	10/7/99	250	ND	200	ug/l	60.0-140	80.0	25.0	21.4	
Benzene	"		ND	2.93	"	60.0-140		25.0		
Toluene	"		ND	13.0	"	60.0-140		25.0		
Ethylbenzene	"		ND	3.25	"	60.0-140		25.0		
Xylenes (total)	"		ND	15.5	"	60.0-140		25.0		
Methyl tert-butyl ether	"		ND	7.73	"	60.0-140		25.0		
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.73	"	70.0-130	87.3			
Batch: 9100184 Date Prepared: 10/7/99 Extraction Method: EPA 5030B [P/T]										
Blank 9100184-BLK1										
Purgeable Hydrocarbons	10/7/99			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	"	2.50				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.90	"	70.0-130	99.0			
LCS 9100184-BS1										
Purgeable Hydrocarbons	10/7/99	250		321	ug/l	70.0-130	128			
Benzene	"			5.37	"	70.0-130				
Toluene	"			19.3	"	70.0-130				
Ethylbenzene	"			5.88	"	70.0-130				





Environmental Resolutions (Exxon) 73 Digital Drive, Suite 100 Novato, CA 94949	Project: Exxon Project Number: 7-3006 Project Manager: Peter Petro	Sampled: 9/29/99 Received: 9/30/99 Reported: 10/18/99
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Total Purgeable Hydrocarbons (C6-C12) BTEX and MTBE by DHS LUP/D/Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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LCS (continued) 9100184-BS1

Xylenes (total)	10/7/99			24.9	ug/l	70.0-130				
Methyl tert-butyl ether	"			9.47	"	70.0-130				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		11.7	"	70.0-130	117			

Matrix Spike 9100184-MS1 M910055-05

Purgeable Hydrocarbons	10/7/99	250	ND	242	ug/l	60.0-140	96.8			
Benzene	"		ND	3.46	"	60.0-140				
Toluene	"		ND	16.2	"	60.0-140				
Ethylbenzene	"		ND	3.91	"	60.0-140				
Xylenes (total)	"		0.591	18.0	"	60.0-140				
Methyl tert-butyl ether	"		ND	6.35	"	60.0-140				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.01	"	70.0-130	90.1			

Matrix Spike Dup 9100184-MSD1 M910055-05

Purgeable Hydrocarbons	10/7/99	250	ND	245	ug/l	60.0-140	98.0	25.0	1.23	
Benzene	"		ND	3.39	"	60.0-140		25.0		
Toluene	"		ND	15.4	"	60.0-140		25.0		
Ethylbenzene	"		ND	3.70	"	60.0-140		25.0		
Xylenes (total)	"		0.591	17.4	"	60.0-140		25.0		
Methyl tert-butyl ether	"		ND	6.49	"	60.0-140		25.0		
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.30	"	70.0-130	93.0			

Batch: 9100222 Date Prepared: 10/8/99 Extraction Method: EPA 5030B [P/T]

Blank 9100222-BLK1

Purgeable Hydrocarbons	10/8/99			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	"	2.50				
Surrogate: a,a,a-Trifluorotoluene	"	10.0		9.54	"	70.0-130	95.4			

LCS 9100222-BS1

Purgeable Hydrocarbons	10/8/99			114	ug/l	70.0-130				
Benzene	"	10.0		8.98	"	70.0-130	89.8			
Toluene	"	10.0		8.40	"	70.0-130	84.0			
Ethylbenzene	"	10.0		8.64	"	70.0-130	86.4			
Xylenes (total)	"	30.0		26.0	"	70.0-130	86.7			
Surrogate: a,a,a-Trifluorotoluene	"	10.0		8.20	"	70.0-130	82.0			





Environmental Resolutions (Exxon) 73 Digital Drive, Suite 100 Novato, CA 94949	Project: Exxon Project Number: 7-3006 Project Manager: Peter Petro	Sampled: 9/29/99 Received: 9/30/99 Reported: 10/18/99
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Total Purgeable Hydrocarbons (C6-C12) (BTEX and MTHB) by HPLC (EPA Method 8210)
Sequoia Analytical - Morgan Hill

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
LCS Dup	9100222-BSD1									
Purgeable Hydrocarbons	10/8/99			113	ug/l	70.0-130		25.0		
Benzene	"	10.0		9.37	"	70.0-130	93.7	25.0	4.25	
Toluene	"	10.0		8.65	"	70.0-130	86.5	25.0	2.93	
Ethylbenzene	"	10.0		8.86	"	70.0-130	88.6	25.0	2.51	
Xylenes (total)	"	30.0		26.6	"	70.0-130	88.7	25.0	2.28	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		9.46	"	70.0-130	94.6			

Batch: 9100489	Date Prepared: 10/15/99	Extraction Method: EPA 5030B [P/T]
Blank	9100489-BLK1	
Purgeable Hydrocarbons	10/15/99	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 " 2.50
Surrogate: <i>a,a,a</i> -Trifluorotoluene	" 10.0	8.66 " 70.0-130 86.6

LCS	9100489-BS1									
Purgeable Hydrocarbons	10/15/99			92.2	ug/l	70.0-130				
Benzene	"	10.0		10.1	"	70.0-130	101			
Toluene	"	10.0		10.0	"	70.0-130	100			
Ethylbenzene	"	10.0		10.7	"	70.0-130	107			
Xylenes (total)	"	30.0		32.6	"	70.0-130	109			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		9.82	"	70.0-130	98.2			

LCS Dup	9100489-BSD1									
Purgeable Hydrocarbons	10/15/99			111	ug/l	70.0-130		25.0		
Benzene	"	10.0		9.96	"	70.0-130	99.6	25.0	1.40	
Toluene	"	10.0		9.95	"	70.0-130	99.5	25.0	0.501	
Ethylbenzene	"	10.0		10.9	"	70.0-130	109	25.0	1.85	
Xylenes (total)	"	30.0		33.2	"	70.0-130	111	25.0	1.82	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	10.0		9.59	"	70.0-130	95.9			





Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308

Environmental Resolutions (Exxon) 73 Digital Drive, Suite 100 Novato, CA 94949	Project: Exxon Project Number: 7-3006 Project Manager: Peter Petro	Sampled: 9/29/99 Received: 9/30/99 Reported: 10/18/99
--	--	---

Diesel Hydrocarbons (C9-C21) by SDHS LHM/Quality Control
Sequoia Analytical - Morgan Hill

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
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Batch: 9100138 **Date Prepared: 10/5/99** **Extraction Method: EPA 3510B**

Blank **9100138-BLK1**
Diesel Range Hydrocarbons 10/8/99 ND ug/l 50.0
Surrogate: n-Pentacosane " 100 87.6 " 50.0-150 87.6

LCS **9100138-BS1**
Diesel Range Hydrocarbons 10/8/99 1000 697 ug/l 60.0-140 69.7
Surrogate: n-Pentacosane " 100 89.4 " 50.0-150 89.4

LCS Dup **9100138-BSD1**
Diesel Range Hydrocarbons 10/8/99 1000 672 ug/l 60.0-140 67.2 50.0 3.65
Surrogate: n-Pentacosane " 100 79.0 " 50.0-150 79.0

Batch: 9100191 **Date Prepared: 10/7/99** **Extraction Method: EPA 3510B**

Blank **9100191-BLK1**
Diesel Range Hydrocarbons 10/12/99 ND ug/l 50.0
Surrogate: n-Pentacosane " 100 92.6 " 50.0-150 92.6

LCS **9100191-BS1**
Diesel Range Hydrocarbons 10/12/99 1000 870 ug/l 60.0-140 87.0
Surrogate: n-Pentacosane " 100 99.9 " 50.0-150 99.9

LCS Dup **9100191-BSD1**
Diesel Range Hydrocarbons 10/12/99 1000 823 ug/l 60.0-140 82.3 50.0 5.55
Surrogate: n-Pentacosane " 100 103 " 50.0-150 103





Environmental Resolutions (Exxon)
73 Digital Drive, Suite 100
Novato, CA 94949

Project: Exxon
Project Number: 7-3006
Project Manager: Peter Petro

Sampled: 9/29/99
Received: 9/30/99
Reported: 10/18/99

Notes and Definitions

#	Note
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- 1 Chromatogram Pattern: Gasoline C6-C12
- 2 Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
- 3 Chromatogram Pattern: Weathered Gasoline C6-C12
- 4 Chromatogram Pattern: Weathered Gasoline C6-C12 + Unidentified Hydrocarbons C6-C12
- 5 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- 6 Chromatogram Pattern: Weathered Diesel C9-24 + Unidentified Hydrocarbons C9-C36
- 7 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
- 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





Surplus Analytic
680 Chesapeake Dr.
Redwood City, CA 94063
(650) 364-9600 • FAX (650) 364-9233

EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

Consultant's Name: ERI / Exxon

Page 1 of 2

Address: 74 Digital Dr, Suite 6, Novato, CA 94949

Site Location: 720 High St. Oakland

Project #: 990929-22

Consultant Project #: 2010

Consultant Work Release #: 19908556

Project Contact: Peter Petro

Phone #: (415) 382-5915

Laboratory Work Release #: 19432503

EXXON Contact: Marla Guensler

Phone #: (925) 246-8776

EXXON RAS #: 7-3006

Sampled by (print): Jeremy

Sampler's Signature: [Signature]

Shipment Method:

Air Bill #:

D
M909ACD

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	TPH/	TRPH	MTBE	Temperature: _____
							BTEX/ 8015/ 8020	Diesel EPA 8015	S.M. 5520	(8020)	
<u>MW-1</u> ✓	<u>9/29</u>	<u>1055</u>	<u>W</u>	<u>HCC</u>	<u>5</u>	<u>01</u>	X	X		X	
<u>MW-2</u> ✓	<u> </u>	<u>1115</u>	<u> </u>	<u> </u>	<u> </u>	<u>02</u>	X	X		X	
<u>MW-3</u> ✓	<u> </u>	<u>1240</u>	<u> </u>	<u> </u>	<u> </u>	<u>03</u>	X	X		X	
<u>MW-4</u> ✓	<u> </u>	<u>1150</u>	<u> </u>	<u> </u>	<u> </u>	<u>04</u>	X	X		X	
<u>MW-6</u> ✓	<u> </u>	<u>1320</u>	<u> </u>	<u> </u>	<u> </u>	<u>05</u>	X	X		X	
<u>MW-7</u> ✓	<u> </u>	<u>1210</u>	<u> </u>	<u> </u>	<u> </u>	<u>06</u>	X	X		X	
<u>MW-8</u> ✓	<u> </u>	<u>1340</u>	<u> </u>	<u> </u>	<u> </u>	<u>07</u>	X	X		X	
<u>MW-12</u> ✓	<u> </u>	<u>1400</u>	<u> </u>	<u> </u>	<u> </u>	<u>08</u>	X	X		X	
<u>MW-13</u> ✓	<u> </u>	<u>1300</u>	<u> </u>	<u> </u>	<u> </u>	<u>09</u>	X	X		X	

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<u>[Signature]</u> BTS	<u>9/29/99</u>	<u>9:05</u>	<u>[Signature]</u>	<u>9/30/99</u>	<u>9:05</u>	
<u>[Signature]</u>	<u>9/30/99</u>		<u>[Signature]</u> MU	<u>9/30/99</u>	<u>1218</u>	

White - Sequoia Valley - Samples



Sequoia Analytical
680 Chesapeake Dr.
Redwood City, CA 94063
(650) 364-9600 • FAX (650) 364-9233

EXXON COMPANY, U.S.A.
P.O. Box 2180, Houston, TX 77002-7426
CHAIN OF CUSTODY

Consultant's Name: ERI / Exxon

Page 2 of 2

Address: 74 Digital Dr, Suite 6, Novato, CA 94949

Site Location: 720 High St. Oakland

Project #: 990929-22

Consultant Project #: 2010

Consultant Work Release #: 19908556

Project Contact: Peter Petro

Phone #: (415) 382-5995

Laboratory Work Release #: 19432503

EXXON Contact: Marla Guensler

Phone #: (925) 246-8776

EXXON RAS #: 7-3006

Sampled by (print): Jerem?

Sampler's Signature: [Signature]

Shipment Method:

Air Bill #:

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

ANALYSIS REQUIRED M909ACD

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/ 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520	MTBE (8020)	Temperature: _____	
											Inbound Seal: Yes No	Outbound Seal: Yes No
<u>MW-14</u>	<u>9/29</u>	<u>1055</u>	<u>L</u>	<u>4u</u>	<u>5</u>	<u>10</u>	<u>XX</u>	<u>XX</u>		<u>XX</u>		
<u>MW-15</u>	<u>↓</u>	<u>1135</u>	<u>↓</u>	<u>↓</u>	<u>5</u>	<u>11</u>	<u>XX</u>	<u>XX</u>		<u>XX</u>		
<u>TB</u>	<u>↓</u>	<u>—</u>	<u>↓</u>	<u>↓</u>	<u>2</u>	<u>12</u>	<u>XX</u>			<u>XX</u>		

RELIQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<u>[Signature]</u> BTS	<u>9/30/99</u>	<u>9:05</u>	<u>[Signature]</u>	<u>9/30/99</u>	<u>9:05</u>	
<u>[Signature]</u>	<u>9/30/99</u>		<u>[Signature]</u>	<u>9/30/99</u>	<u>12/8</u>	

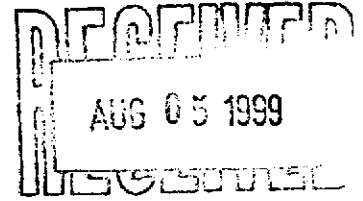
White - Sequoia Valley - Seminars



Sequoia Analytical

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

August 4, 1999



Peter Petro
ERI
74 Digital Dr. Suite 100
Novato, CA 94949

RE: Exxon/P907544

Dear Peter Petro:

Enclosed are the results of analyses for sample(s) received by the laboratory on July 28, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matt Sakai
Project Manager

CA ELAP Certificate Number I-2374





ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 7/28/99 Received: 7/28/99 Reported: 8/4/99
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ANALYTICAL REPORT FOR P907544

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
A-Inf/7-3006	P907544-01	Air	7/28/99
A-Eff/7-3006	P907544-02	Air	7/28/99





ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 7/28/99 Received: 7/28/99 Reported: 8/4/99
---	--	---

Sample Description: **A-Inf/7-3006**
 Laboratory Sample Number: **P907544-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - Petaluma

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Gasoline	9070343	7/30/99	7/30/99		10.0	15.5	ug/l	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	0.246	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	"	"	65.0-135		107	%	
Surrogate: <i>4-Bromofluorobenzene</i>	"	"	"	65.0-135		106	"	





ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 7/28/99 Received: 7/28/99 Reported: 8/4/99
---	--	---

Sample Description: **A-Eff/7-3006**
 Laboratory Sample Number: **P907544-02**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - Petaluma

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Gasoline	9070343	7/30/99	7/30/99		10.0	ND	ug/l	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	"	"	65.0-135		106	%	
Surrogate: <i>4-Bromofluorobenzene</i>	"	"	"	65.0-135		105	"	





ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 7/28/99 Received: 7/28/99 Reported: 8/4/99
---	--	---

**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*
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Batch: 9070343	Date Prepared: 7/19/99	Extraction Method: EPA 5030 waters								
Blank	9070343-BLK1									
Gasoline	7/19/99			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		326	"	65.0-135	109			
Surrogate: 4-Bromofluorobenzene	"	300		263	"	65.0-135	87.7			

Blank	9070343-BLK2									
Gasoline	7/30/99			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		343	"	65.0-135	114			
Surrogate: 4-Bromofluorobenzene	"	300		305	"	65.0-135	102			

LCS	9070343-BS1									
Benzene	7/19/99	100		83.0	ug/l	65.0-135	83.0			
Toluene	"	100		86.4	"	65.0-135	86.4			
Ethylbenzene	"	100		88.0	"	65.0-135	88.0			
Xylenes (total)	"	300		268	"	65.0-135	89.3			
Surrogate: a,a,a-Trifluorotoluene	"	300		311	"	65.0-135	104			

LCS	9070343-BS2									
Gasoline	7/30/99	1000		985	ug/l	65.0-135	98.5			
Surrogate: 4-Bromofluorobenzene	"	300		275	"	65.0-135	91.7			

Matrix Spike	9070343-MS1	P907285-01								
Benzene	7/19/99	100	ND	80.6	ug/l	65.0-135	80.6			
Toluene	"	100	ND	84.3	"	65.0-135	84.3			
Ethylbenzene	"	100	ND	86.6	"	65.0-135	86.6			
Xylenes (total)	"	300	ND	264	"	65.0-135	88.0			
Surrogate: a,a,a-Trifluorotoluene	"	300		285	"	65.0-135	95.0			

Matrix Spike Dup	9070343-MSD1	P907285-01								
Benzene	7/19/99	100	ND	80.7	ug/l	65.0-135	80.7	20.0	0.124	
Toluene	"	100	ND	84.2	"	65.0-135	84.2	20.0	0.119	
Ethylbenzene	"	100	ND	86.1	"	65.0-135	86.1	20.0	0.579	
Xylenes (total)	"	300	ND	262	"	65.0-135	87.3	20.0	0.799	



ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 7/28/99 Received: 7/28/99 Reported: 8/4/99
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**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)	9070343-MSD1	P907285-01								
Surrogate: <i>a,a,a-Trifluorotoluene</i>	7/19/99	300		295	ug/l	65.0-135	98.3			





ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 7/28/99 Received: 7/28/99 Reported: 8/4/99
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Notes and Definitions

#	Note
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- 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
 680 Chesapeake Dr.
 Redwood City, CA 94063
 (650) 364-9600 • FAX (650) 364-9233

EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

Consultant's Name: <u>Environmental Resolutions Inc.</u>		Page <u>1</u> of <u>1</u>
Address: <u>73 Digital Dr. Suite 102 Newark Ca 94949</u>		Site Location: <u>720 High St.</u>
Project #:	Consultant Project #: <u>201011X</u>	Consultant Work Release #: <u>14432503</u>
Project Contact: <u>Peter Petco</u>	Phone #: <u>(415) 382-9105</u>	Laboratory Work Release #:
EXXON Contact: <u>Marla Grossler</u>	Phone #: <u>(925) 246-8776</u>	EXXON RAS #: <u>7-3006</u>
Sampled by (print): <u>Joel Dyer</u>	Sampler's Signature: <u>[Signature]</u>	<u>Oakland Ca</u>
Shipment Method:	Air Bill #:	

TAT: <input type="checkbox"/> 24 hr <input type="checkbox"/> 48 hr <input type="checkbox"/> 72 hr <input type="checkbox"/> 96 hr <input checked="" type="checkbox"/> 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: _____		
<u>A - Inf</u>	<u>7/28/99</u>	<u>11:15</u>	<u>Air</u>		<u>1</u>	<u>P907544-01</u>	<u>X</u>					
<u>A - Eff</u>	<u>7/28/99</u>	<u>11:15</u>	<u>Air</u>		<u>1</u>	<u>-02</u>	<u>X</u>					

JULY 28 1999 SEALS INTACT NO INSTRUCTIONS
 MADE 22 °C

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<u>[Signature] / ERI</u>			<u>[Signature]</u>	<u>7/28</u>	<u>15:15</u>	
<u>[Signature]</u>	<u>7/28/99</u>	<u>16:00</u>	<u>[Signature]</u>	<u>7-29-99</u>	<u>16:00</u>	
<u>[Signature]</u>	<u>7-29-99</u>	<u>16:00</u>	<u>[Signature]</u>	<u>7/29/99</u>	<u>16:00</u>	

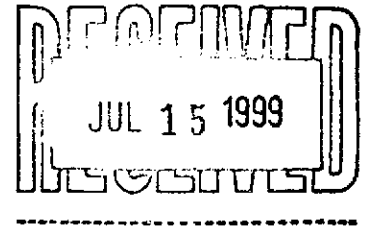
Pink - Client
Yellow - Sequoia
White - Sequoia



Sequoia Analytical

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

July 13, 1999



Peter Petro
ERI
74 Digital Dr. Suite 100
Novato, CA 94949

RE: Exxon/P907077

Dear Peter Petro:

Enclosed are the results of analyses for sample(s) received by the laboratory on July 7, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Matt Sakai
Project Manager

CA ELAP Certificate Number I-2374



ERI
74 Digital Dr. Suite 100
Novato, CA 94949

Project: Exxon
Project Number: 2010-11X/7-3006
Project Manager: Peter Petro

Sampled: 7/6/99
Received: 7/7/99
Reported: 7/13/99

ANALYTICAL REPORT FOR P907077

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
A-INF/7-3006	P907077-01	Air	7/6/99
A-EFF/7-3006	P907077-02	Air	7/6/99



ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 2010-11X/7-3006 Project Manager: Peter Petro	Sampled: 7/6/99 Received: 7/7/99 Reported: 7/13/99
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Sample Description: **A-INF/7-3006**
 Laboratory Sample Number: **P907077-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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Sequoia Analytical - Petaluma

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M

Gasoline	9070106	7/8/99	7/8/99		10.0	ND	ug/l	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	"	"	65.0-135		96.7	%	
Surrogate: <i>4-Bromofluorobenzene</i>	"	"	"	65.0-135		96.0	"	



ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 2010-11X/7-3006 Project Manager: Peter Petro	Sampled: 7/6/99 Received: 7/7/99 Reported: 7/13/99
---	---	--

Sample Description: A-EFF/7-3006
Laboratory Sample Number: P907077-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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<u>Sequoia Analytical - Petaluma</u>								
<u>Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M</u>								
Gasoline	9070106	7/8/99	7/8/99		10.0	ND	ug/l	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		98.7	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		97.0	"	



ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 2010-11X/7-3006 Project Manager: Peter Petro	Sampled: 7/6/99 Received: 7/7/99 Reported: 7/13/99
---	---	--

**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: 9070106										
Blank										
<u>Date Prepared: 7/8/99</u>										
<u>Extraction Method: EPA 5030 waters</u>										
<u>9070106-BLK2</u>										
Gasoline	7/8/99			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		304	"	65.0-135	101			
Surrogate: 4-Bromofluorobenzene	"	300		288	"	65.0-135	96.0			
Blank										
<u>9070106-BLK3</u>										
Gasoline	7/9/99			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		292	"	65.0-135	97.3			
Surrogate: 4-Bromofluorobenzene	"	300		281	"	65.0-135	93.7			
LCS										
<u>9070106-BS2</u>										
Gasoline	7/8/99	1000		928	ug/l	65.0-135	92.8			
Surrogate: 4-Bromofluorobenzene	"	300		292	"	65.0-135	97.3			
LCS										
<u>9070106-BS3</u>										
Benzene	7/9/99	100		107	ug/l	65.0-135	107			
Toluene	"	100		108	"	65.0-135	108			
Ethylbenzene	"	100		103	"	65.0-135	103			
Xylenes (total)	"	300		319	"	65.0-135	106			
Surrogate: a,a,a-Trifluorotoluene	"	300		302	"	65.0-135	101			
Matrix Spike										
<u>9070106-MS1</u> <u>P907015-01</u>										
Benzene	7/7/99	100	0.683	104	ug/l	65.0-135	103			
Toluene	"	100	2.02	104	"	65.0-135	102			
Ethylbenzene	"	100	1.07	96.9	"	65.0-135	95.8			
Xylenes (total)	"	300	2.62	303	"	65.0-135	100			
Surrogate: a,a,a-Trifluorotoluene	"	300		293	"	65.0-135	97.7			
Matrix Spike Dup										
<u>9070106-MSD1</u> <u>P907015-01</u>										
Benzene	7/7/99	100	0.683	103	ug/l	65.0-135	102	20.0	0.976	
Toluene	"	100	2.02	104	"	65.0-135	102	20.0	0	
Ethylbenzene	"	100	1.07	97.8	"	65.0-135	96.7	20.0	0.935	
Xylenes (total)	"	300	2.62	304	"	65.0-135	100	20.0	0	



ERI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 2010-11X/7-3006 Project Manager: Peter Petro	Sampled: 7/6/99 Received: 7/7/99 Reported: 7/13/99
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**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*
<u>Matrix Spike Dup (continued)</u>	<u>9070106-MSD1</u>	<u>P907015-01</u>								
Surrogate: a,a,a-Trifluorotoluene	7/7/99	300		291	ug/l	65.0-135	97.0			



RI 74 Digital Dr. Suite 100 Novato, CA 94949	Project: Exxon Project Number: 2010-11X/7-3006 Project Manager: Peter Petro	Sampled: 7/6/99 Received: 7/7/99 Reported: 7/13/99
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Notes and Definitions

Note

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



Sequoia Analytical

680 Chesapeake Dr.
Redwood City, CA 94063
(650) 364-9600 • FAX (650) 364-9233

EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

Consultant's Name: *Environmental Resolutions Inc*

Page 1 of 1

Address: *73 Digital Dr. #100*

Site Location: *700 High St.*

Project #:

Consultant Project #: *2010-11X*

Consultant Work Release #: *19432503*

Project Contact: *Pete Petro*

Phone #: *(415) 382-9105*

Laboratory Work Release #:

EXXON Contact: *Marla Guenlar*

Phone #: *(925) 246-8776*

EXXON RAS #: *7-3006*

Sampled by (print): *Casey Sanders*

Sampler's Signature: *Casey Sanders*

Oakland, CA

Shipment Method:

Air Bill #:

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

ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/8015/8020	TPH/Diesel EPA 8015	TRPH S.M. 5520	Temperature: _____	Inbound Seal: Yes No	Outbound Seal: Yes No
<i>A-Inf</i>	<i>7/6/99</i>	<i>15:30</i>	<i>Air</i>	<i>NA</i>	<i>1</i>		<i>X</i>					
<i>A-EFF</i>	<i>7/6/99</i>	<i>15:30</i>	<i>Air</i>	<i>NA</i>	<i>1</i>		<i>X</i>					
<p>COOLER CUSTODY SEALS INACTIVE</p> <p>COOLER TEMPERATURE <u>22°</u></p>												

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<i>Casey Sanders</i>	<i>7-6-99</i>		<i>N. M.</i>	<i>7/7/99</i>	<i>14:10</i>	
<i>N. M.</i>	<i>7/7/99</i>	<i>15:30</i>	<i>Janzen</i>	<i>7/7</i>	<i>15:30</i>	

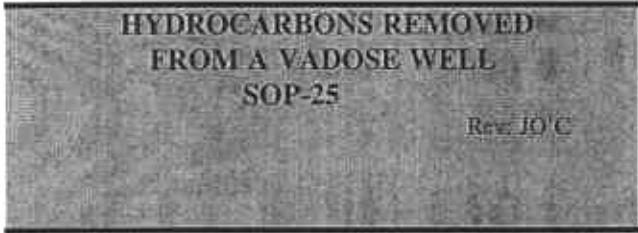
Pink - Client

Yellow - Sequoia

White - Sequoia

ATTACHMENT C

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



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 H₂O) (use {-} for vacuum)
- 3) Vapor temperature at the flow measuring device.
- 4) Hydrocarbon content of vapor (usually in mg/M³) 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.
- 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 ₂ O	HC conc mg/M ³	Vapor flow acfm	Calc. lb. 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 H₂O. T_{abs} = 460 + T deg F

Hours of operation = 21, T = 80, P = -13, HC = (1350+750)/2 = 1050 mg/M³. Flow = 95

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

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

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

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/M³. ppmv x molecular wt. /24.1 = mg/M³. (Use 102 for gasoline)