

EXXON COMPANY, U.S.A.

ENVIRONMENTAL
PROTECTION

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

99 AUG 24 PM 4:42

DARIN L. ROUSE
SENIOR ENGINEER
(925) 246-8768
(925) 246-8798 FAX

#136

August 17, 1999

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

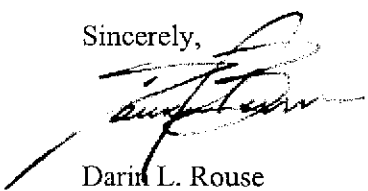
RE: Former Exxon RAS #7-3006/720 High Street, Oakland, California.

Dear Mr. Chan:

Attached for your review and comment is a letter report entitled *Quarterly Groundwater Monitoring and Remediation Status Report, Second Quarter 1999*, dated August 4, 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, Second Quarter 1999, dated August 4, 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



ENVIRONMENTAL RESOLUTIONS, INC.

August 4, 1999
ERI 201011.R20

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

Subject: Quarterly Groundwater Monitoring and Remediation Status Report, Second 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 second quarter 1999, groundwater monitoring and sampling and remedial activities at the subject site. The location of the site is shown on the Site Vicinity Map (Plate 1). The purpose of ongoing remedial activities is to remove residual hydrocarbons from soil and dissolved hydrocarbons from groundwater. The purpose of quarterly monitoring is to evaluate concentrations of dissolved hydrocarbons in groundwater and the effectiveness of remedial actions. The location of selected site features are shown on the Generalized Site Plan (Plate 2). Blaine Tech Services, Inc. (Blaine Tech) performed the groundwater sampling and monitoring, ERI performed operation and maintenance activities.

GROUNDWATER MONITORING AND SAMPLING

On June 22, 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 ongoing air sparge/soil vapor extraction (AS/SVE) remediation activities, groundwater elevations and gradient may not be indicative of actual conditions. Therefore, a hydraulic gradient and flow direction have not been calculated.

Laboratory Analyses and Results

Groundwater samples were submitted to Sequoia Analytical Laboratories, Inc., 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. Cumulative operational and performance data are presented in Table 2. Copies of the laboratory analysis reports and Chain of Custody records for soil vapor extraction system samples collected during the reporting period are attached (Attachment B).

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

Groundwater Extraction and Treatment

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

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

*County Ok
discontinuing
GRS.*

SUMMARY AND STATUS OF INVESTIGATION

Based on data collected to date, it appears the AS/SVE system is removing residual hydrocarbons in soil and dissolved hydrocarbons in groundwater. The estimated amount of hydrocarbons removed by the system was performed according to ERI's standard operation procedures (SOP-25 "Hydrocarbons Removed from a Vadose Well") included in Attachment C. ERI will continue to operate the remedial systems, monitor, and sample groundwater at the site during the third 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
04/16/99 - 06/29/99	8	1
To Date:	5,140	844

The GRS was not operational during the second 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
04/16/99 - 06/29/99	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.

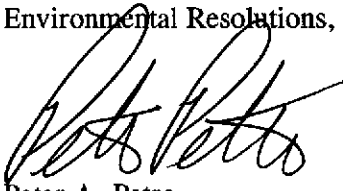
ERI recommends forwarding copies of this report to:


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

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 # (TOC)	Sampling Date	SUBJ <.....>	DTW feet.....>	Elev. <.....>	TEPHd <.....>	TPPHg <.....>	MTBE <.....>	B <.....>	T <.....>	E <.....>	X <.....>	VOCs <.....>	EHCss <.....>	TOG <.....>
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	---	---	---	
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	---	---	---	
3/24/98	NLPH	5.93	6.99	4,600	1,500	25	5,500	<5.0	<5.0	<5.0	---	---	---	

consultants suggest sheen is not petroleum hydrocarbons

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 3 of 11)

Well ID #	Sampling Date	SUBJ	DTW feet	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
			<.....>		<.....>									
			ug/l											
MW3 (cont.) (12.92)	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	<50	74	<10	<10	<10	---	---	---
	3/24/99	Sheen	4.36	8.56	3,850	2,330	<20	<5.0	<5.0	<5.0	<5.0	---	---	---
	6/22/99	NLPH	6.22	6.70	6,860	1,470	<10	492	<2.5	<2.5	<2.5	---	---	---
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	---	---	---	
MW5	7/18/89	Well Destroyed												

TABLE 1
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 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 4 of 11)

Well ID #	Sampling Date	SUBJ	DTW feet	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG
(TOC)	Date	<.....>	<.....>		<.....>				ug/l					
MW6	1/20/94	--- [NR]	---	---	---	---	---	---	---	---	---	---	---	---
(14.27)	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	---	---	---
MW7	1/20/94	NLPH	8.67	6.17	---	---	---	---	---	---	---	---	---	---
(14.84)	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 #	Sampling	SUBJ	DTW	Elev.	TEPHd	TPPHg	MTBE	B	T	E	X	VOCs	EHCss	TOG		
(TOC)	Date	<	feet	>	<	ug/l										>
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	---	---	---			
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	---	---	---			

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	EHCs	TOG
(TOC)	Date	<.....>	feet	<.....>	<.....>	<.....>	<.....>	<.....>	<.....>	<.....>	<.....>	<.....>	<.....>	<.....>
					ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
MW8 (cont.) (13.45)	3/24/98	NLPH	6.52	6.93	2,900	10,000	<125	190	<25	470	330	---	---	---
	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	---	---	---
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													

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					>
MW12 (cont.) (12.61)	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	---	---	---
	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	---	---	---
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	---	---	---	

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 <.....>
MW15 (cont.) (13.73)	6/7/95	Sheen	7.14	6.59	---	---	---	---	---	---	---	---	---	---
	9/18/95	Sheen	9.00	4.73	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	10.67	3.06	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	7.27	6.46	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	6.65	7.08	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	9.45	4.28	---	---	---	---	---	---	---	---	---	---
	12/11/96	Sheen	7.77	5.96	---	---	---	---	---	---	---	---	---	---
	3/19/97	Sheen	8.15	5.58	---	---	---	---	---	---	---	---	---	---
	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	---	---	---

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.
- a = A peak eluting earlier than benzene and suspected to be methyl tertiary butyl ether was present.
- * = TEPH note: Analyst notes samples resemble paint thinner more than Stoddard Solvent.
- b = Sample containers for TPPHg, BTEX, and MTBE were broken in transit.

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 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
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												
12/18/95	A-INF	70		151	18.5	0.5	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
3/25/96	A-INF	70		147	2.4	0	< 10	< 1.65	2,565.4	< 0.1	< 0.017	< 42.09	
	A-EFF						< 10			< 0.1			< 0.0013
3/25/96	System shutdown to install Thermtch VAC-25 thermal/catalytic oxidizer												
8/5/96	Start-up system utilizing Thermtch 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 Thermacouple, 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
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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
2/18/97				176	95	0.8	402	16.05	3,182.1				
2/28/97				176	53	0	224	49.48	3,231.6				
3/5/97	A-INF			176			210	17.15	3,248.7	< 0.10	< 0.491	< 43.57	
	A-EFF						< 10			< 0.10			< 0.0016
3/12/97				211.2	62	0.7	262						
3/19/97				220	33	1	140						
3/26/97				211.2	35	1	148						
4/2/97	A-INF			220			170	94.55	3,343.3	4.0	< 1.020	< 44.59	
	A-EFF						< 10			< 0.10			< 0.0020
4/9/97				220	40	1	169						
4/16/97				220	58	3	245						
4/23/97				220	30	1	127						
4/30/97				220	30	2	127						
5/8/97	A-INF			193.6			340	170.41	3,513.7	4.8	2.940	< 47.53	
	A-EFF						< 10			< 0.10			< 0.0017
5/14/97				193.6	80	1	339						
5/21/97				193.6	20	1	85						
5/28/97				176	42	0	178						
6/4/97	A-INF			176			360	156.76	3,670.4	2.9	1.724	< 49.26	
	A-EFF						< 10			< 0.10			< 0.0016
6/11/97				176	40	0	169						
6/18/97				158.4	38	0	161						
6/25/97				167.2	36	0	152						
7/2/97	A-INF			167.2			350	153.11	3,823.5	5.4	1.790	< 51.04	
	A-EFF						< 10			< 0.10			< 0.0015
7/9/97				202.4	29.4	0	124						
7/18/97				246.4	14.7	0	62						
7/22/97				246.4	54.2	0	229						
7/30/97				220	36.1	0	153						
8/7/97	A-INF			220			160	159.53	3,983.1	< 0.50	< 1.846	< 52.89	
	A-EFF						13			< 0.10			< 0.0020
8/11/97				220	19.1	0	81						
8/20/97				167.2	13.1	0	55						
8/27/97				158.4	20.0	0	85						
9/3/97	A-INF			158.4			400	128.39	4,111.5	< 1.0	< 0.344	< 53.23	
	A-EFF						< 10			< 0.10			< 0.0014
9/10/97				123.2	800	4.0	3386						
9/17/97				158.4	131	1.1	554						
9/24/97				176	40	0	169						
10/8/97	A-INF			176			200	157.59	4,269.1	3.1	1.077	< 54.31	
	A-EFF						< 10			< 0.10			< 0.0016
10/15/97				193.6	50	0.9	212						
10/22/97				176	50	1.5	212						
10/30/97				158.4	30	0	127						
11/5/97				167.2	65	7.6	275						
11/12/97	A-INF			176			880	298.58	4,567.6	< 0.10	< 0.885	< 55.20	
	A-EFF						< 10			< 0.10			< 0.0016
11/20/97				158.4	33	3.2	138						
11/25/97				123.2	56	3.0	237						
12/3/97	A-INF			220			NA			NA	NA	NA	
	A-EFF						< 10			< 0.10			< 0.0020
12/10/97				176	19	0.5	80						

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
12/17/97				193.6	16	0.6	68						
12/23/97				193.6	13	0.0	55						
12/29/97				176			51	345.64	4,913.3	< 0.10	< 0.074	< 55.27	
	A-INF						< 10			< 0.10			< 0.0016
	A-EFF						< 10			< 0.1			< 0.0016
1/6/98				176			70	7.65	4,920.9	2.1	< 0.139	< 55.41	
	A-INF						< 10			< 0.1			< 0.0016
	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				132			< 10	< 15.48	< 4,936.4	1.1	0.619	< 56.03	
	A-INF						< 10			< 0.1			< 0.0012
	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				193.6			< 10	< 4.24	< 4,940.6	1.5	0.551	< 56.58	
	A-INF						< 10			< 0.1			< 0.0017
	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				88			10	< 5.18	< 4,945.8	0.26	0.456	< 57.04	
	A-INF						< 10			< 0.1			< 0.0008
	A-EFF						< 10			< 0.1			< 0.0008
4/28/98				88	2.3	1.6							
5/12/98				88			< 10	< 1.66	< 4,947.5	< 0.1	< 0.032	< 57.07	
	A-INF						< 10			< 0.1			< 0.0008
	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				88	4.3	2.1	18	< 2.32	< 4,949.8	< 0.1	< 0.017	< 57.08	
	A-INF						< 10			< 0.1			< 0.0008
	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				96.8	3.4	0.8	< 10	< 4.18	< 4,954.0	< 0.1	< 0.030	< 57.11	
	A-INF						< 10			< 0.1			< 0.0009
	A-EFF						< 10			< 0.1			< 0.0009
7/14/98				132	3.1	0.0	39	< 1.51	< 4,955.5	0.91	< 0.031	< 57.15	
	A-INF						< 10			< 0.1			< 0.0012
	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				176	0.3	0.1	13	< 0.16	< 4,955.7	< 0.10	< 0.003	< 57.15	
	A-INF						< 10			< 0.10			< 0.0016
	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				184.8	4.1	0.0	90	0.02	< 4,955.7	2.30	< 0.001	< 57.15	
	A-INF						< 10			< 0.1			< 0.0017
	A-EFF						< 10			< 0.1			< 0.0017
8/11/98				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
8/18/98	A-INF			202.4	3.1	0.3							
8/25/98				193.6	1.8	0.3							
9/3/98	System down upon arrival due to propane tank running empty. System operated for 16 days. Restarted system.												
9/3/98	A-INF			184.8	4.4	0.2	68	20.97	< 4,976.6	1.00	0.464	< 57.61	
	A-EFF						< 10			< 0.10			< 0.0017
9/8/98				202.4	1.8	0.2							
9/22/98	System down upon arrival due to low gas pressure control fault. Rest down 14 days												
9/22/98					2.7	0.3							
9/29/98				176	20.4	1.8							
10/6/98	A-INF			202.4	13.0	1.3	56	20.38	< 4,997.0	1.70	0.444	< 58.06	
	A-EFF						< 10			< 0.10			0.0018
	System down upon arrival due to propane tank running empty. System down for 115.5 hours.												
10/15/98				191.84	1.1	0.2							
10/20/98				193.6	78.6	0.3							
10/27/98				193.6	219.0	6.2							
11/4/98	A-INF			193.6	42.1	3.3	150	44.30	< 5,041.3	5.00	1.727	< 59.78	
	A-EFF						< 10			< 0.10			0.0017
11/12/98				184.8	32.4	3.7							
11/17/98				180.4	97.4	7.5							
11/17/98	System down upon arrival due to propane tank running empty. System down for 82 hours.												
12/2/98	System down upon arrival due to propane tank running empty. System down on departure.												
12/9/98	Restarted system												
12/9/98	A-INF			184.8	10.0	0.6	Bag flat						
	A-EFF						< 10			< 0.10			
12/16/98				184.8	8.5	0.0							
12/23/98	System down upon arrival due to propane tank running empty. System remained down												
1/6/99	Restarted system												
1/6/99	A-INF			281.6	61.6	2.8	63	< 47.70	< 5,089.0	0.15	< 1.153	< 60.94	
	A-EFF						< 10			< 0.1			< 0.0025
1/12/99	A-INF			264	2.8	0.0							
	A-EFF												
1/18/99	A-INF			220	100.8	6.4							
	A-EFF												
1/26/99	A-INF			184.8	32.0	5.6							
	A-EFF												
2/4/99	A-INF			176	12.5	6.7	< 50	< 33.65	< 5,122.7	< 0.5	< 0.076	< 61.01	
	A-EFF						< 50			< 0.5			< 0.0079
2/12/99	A-INF			132	15.2	0.8							
	A-EFF												
2/12/99	System down on departure, compound full with rain water.												
3/18/99	Pumped containment rain water into storage tank, restarted system.												
3/18/99	A-INF			246.4	16.2	0	< 10	< 4.55	< 5,127.2	< 0.5	< 0.076	< 61.09	
	A-EFF						< 10			< 0.5			< 0.0111
3/30/99	A-INF			132	11.5	0							
	A-EFF												
4/9/99	A-INF			154	2.4	0							
	A-EFF												
4/16/99	A-INF			140.8	0	0.9	< 10	< 5.04	< 5,132.3	< 0.1	< 0.151	< 61.24	
	A-EFF						< 10			< 0.1			< 0.0013
4/21/99	A-INF			123.2	5.5	0							
	A-EFF												
4/28/99	A-INF			123.2	10.1	0							

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
5/4/99	A-EFF 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							

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

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
(Page 2 of 12)

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	0.1001	0.4274	0.0134	0.0723
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0055				
4/26/95	82,820	1,301	W-INF	1500	190	44	12	150	NA	0.0722	0.4996	0.0090	0.0813
			W-INT	200	31	3.2	<0.5	15	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.008				
5/9/95	83,750	72	Replaced two 55-gallon liquid phase carbon canisters (leaks)										
5/26/95	97,840	829	W-INF	680	210	16	5.8	28	NA	0.1366	0.6362	0.0251	0.1063
			W-INT	<50	0.94	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
6/6/95	Added two 55-gallon liquid phase carbon canisters in series												
6/6/95	Replaced one 55-gallon liquid phase carbon canister (leak)												
6/8/95			W-INF	2800	660	300	54	340	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
6/27/95	125,010	849	W-INF1	4500	1700	99	35	220	NA	0.5871	1.2233	0.2165	0.3228
			W-INF2	810	420	20	7.9	58	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	0.53	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/10/95	131,370	489	Replaced two 55-gallon liquid phase carbon canisters										
7/11/95	131,690	320	W-INF1	1600	530	15	<10	59	NA	0.1700	1.3933	0.0621	0.3850
			W-INF2	630	270	7.0	<5.0	25	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.041				

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Analytical Data													
Date	Total	Average	Sample							TPHg Removed		Benzene Removed	
	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative
	[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]
Additional Analyses: ND Purgeable Volatile Organics, ND Priority Pollutant Metals, except for 12 ppb nickel and 8.0 ppb zinc													
7/25/95	141,550	704	System down pending results of air samples										
7/28/95	System Down - Could not Restart												
7/31/95	Restart System												
8/15/95	System Down - Remove hydrocarbon vapor detector and send to manufacturer for calibration												
9/11/95	Replaced hydrocarbon vapor detector - Restarted System												
9/13/95	System Down - hydrocarbon vapor detector shut down												
9/18/95	Restart System												
9/18/95	148,550	244	W-INF1	1900	390	33	16	120	NA	0.2462	1.6395	0.0788	0.4637
			W-INF2	490	150	7.6	3.1	30	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/20/95	System Down - hydrocarbon vapor detector shut down												
9/25/95	Restart System												
9/28/95	System Down - hydrocarbon vapor detector shut down												
10/13/95	151,380	113	W-INF1	4900	1400	310	120	480	NA	0.0803	1.7197	0.0235	0.4872
			W-INF2	780	230	49	15	72	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0079				
Additional Analyses: ND Purgeable Volatile Organics													
10/26/95	154,143	213											
11/6/95	157,906	342											
11/20/95	159,664	126	W-INF1	630	140	<5.0	6.9	22	NA	0.1911	1.9108	0.0532	0.5404
			W-INF2	230	36	1.6	2.2	7.6	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
11/27/95	System Down												

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Analytical Data													
Date	Total	Average	Sample ID	TPHg Removed						Benzene Removed			
	Flow [gal]	Flowrate [gpd]		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]
11/29/95	160,361	77	Restart System										
12/4/95	161,442	216											
12/18/95	168,304	490	W-INF1	8900	1100	240	130	2200	NA	0.3435	2.2543	0.0447	0.5851
			W-INF2	3900	380	85	60	890	NA				
			W-INT	<50	1.3	<0.5	<0.5	5.1	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
1/2/96	171,770	231											
1/8/96	173,707	323											
1/16/96	178,573	608	W-INF	490	53	1.8	3.9	35	NA	0.4023	2.6566	0.0494	0.6345
			W-INF2	150	8.1	<0.5	0.61	6.8	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
1/30/96	190,030	818											
2/14/96	202,610	839	W-INF1	840	220	25	<2.5	36	NA	0.1334	2.7900	0.0274	0.6619
			W-INF2	410	96	10	1.1	23	NA				
			W-INT	<50	0.58	1.8	<0.5	2.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
2/27/96	216,100	1,038											
3/12/96	System down upon arrival												
3/12/96	216,590	35	W-INF1	1700	410	110	26	130	NA	0.1481	2.9381	0.0367	0.6986
			W-INF2	420	94	24	5.9	33	NA				
			W-INT	<50	0.53	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
3/25/96	217,460	67	W-INF1	100	6.6	<0.5	<0.5	7	NA	0.0065	2.9446	0.0015	0.7002
			W-INF2	<50	3.9	<0.5	<0.5	1.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
3/25/96	System shutdown, removal of blower/carbon to thermal oxidizer												
7/22/96	Start-up remediation system												

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006

720 High Street

Oakland, California

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

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006

720 High Street

Oakland, California

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

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
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Analytical Data													
Date	Total	Average	Sample							TPHg Removed		Benzene Removed	
	Flow [gal]	Flowrate [gpd]	ID	TPHg [ug/l]	B [ug/l]	T [ug/l]	E [ug/l]	X [ug/l]	Arsenic [mg/l]	Per Period [lb]	Cumulative [lb]	Per Period [lb]	Cumulative [lb]
6/11/97	378,550	474	System down, faulty transfer pump										
7/22/97	Restarted system												
7/22/97	379,120	14	W-INF1	1,300	520	6.2	6.2	34	NA	0.0466	6.1365	0.0165	1.3992
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/29/97	379,315	28											
8/7/97	385,510	688	W-INF1	1,400	400	13	21	52	NA	0.0720	6.2085	0.0245	1.4238
			W-INF2	<50	2.0	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
8/13/97	388,390	480											
8/20/97	391,380	427											
8/27/97	393,545	309											
9/3/97	395,744	314											
9/10/97	397,402	237	W-INF1	<50	<0.5	<0.5	<0.5	<0.5	NA	0.0719	6.2804	0.0199	1.4436
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/17/97	399,232	261											
9/24/97	400,746	216											
10/8/97	403,527	199	W-INF1	<50	0.53	<0.5	<0.5	<0.5	NA	0.0026	6.2829	0.00003	1.4437
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
10/15/97	403,935	58											
10/22/97	406,161	318											
10/30/97	407,795	204											
11/5/97	408,668	146											

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006

720 High Street

Oakland, California

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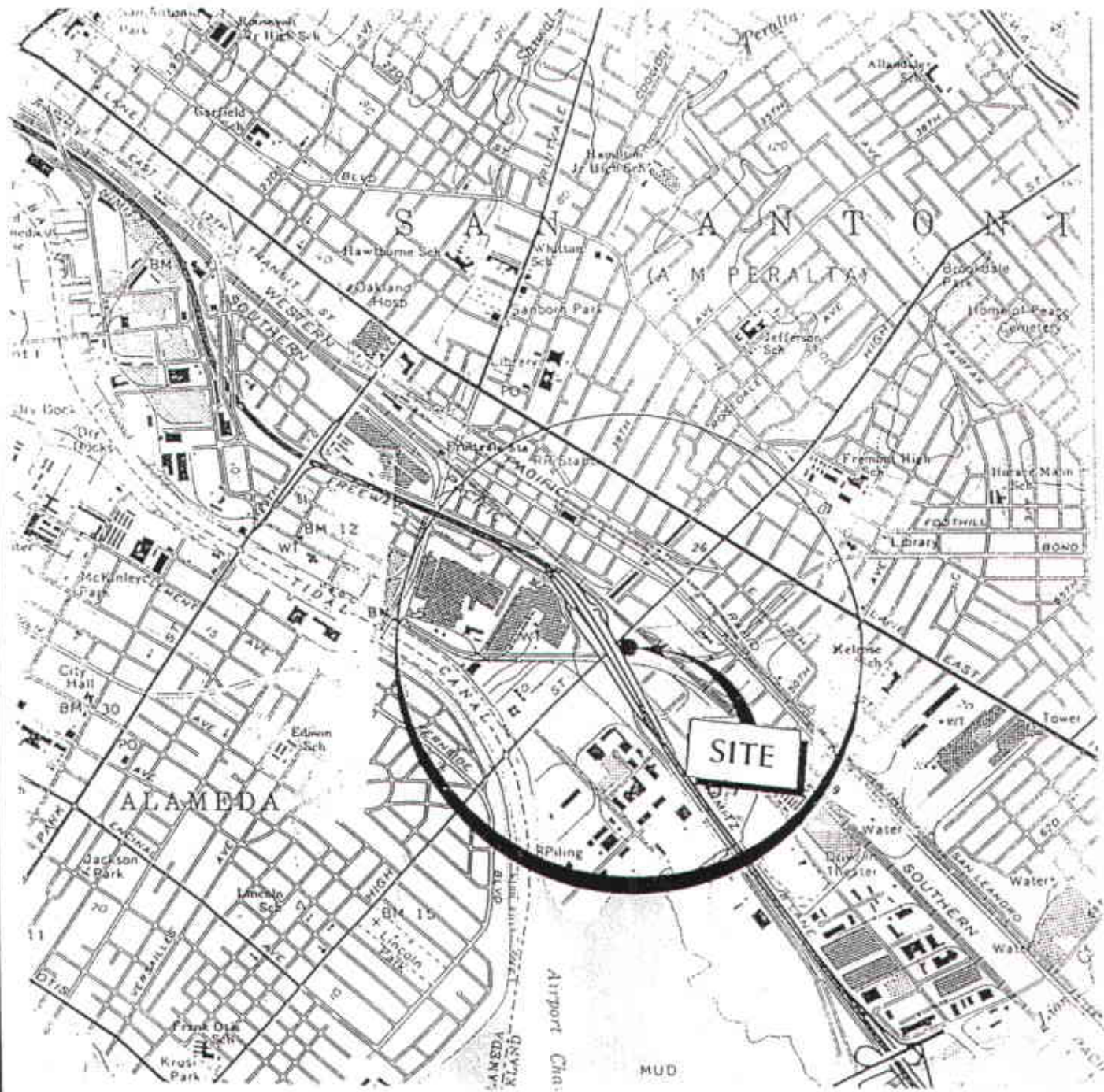
Analytical Data													
Date	Total Flow [gal]	Average Flowrate [gpd]	Sample ID	TPHg						TPHg Removed		Benzene Removed	
				TPHg [ug/l]	B [ug/l]	T [ug/l]	E [ug/l]	X [ug/l]	Arsenic [mg/l]	Per Period [lb]	Cumulative [lb]	Per Period [lb]	Cumulative [lb]
2/3/98	478,169	1,042	W-INF1	1,800	780	66	40	580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

TABLE 3
OPERATION AND PERFORMANCE DATA FOR
GROUNDWATER REMEDIATION SYSTEM

Former Exxon Service Station 7-3006
720 High Street
Oakland, California
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Date	Analytical Data													
	Total	Average	Sample								TPHg Removed		Benzene Removed	
	Flow	Flowrate	ID	TPHg	B	T	E	X	Arsenic	Per Period	Cumulative	Per Period	Cumulative	
[gal]	[gpd]		[ug/l]	[ug/l]	[ug/l]	[ug/l]	[ug/l]	[mg/l]	[lb]	[lb]	[lb]	[lb]		
1/6/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
1/12/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
1/18/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
1/26/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
2/4/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
2/12/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
3/18/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
3/30/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
4/9/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
4/16/99	702,994		System down on departure, pending a permit renewal from EBMUD.											
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.											

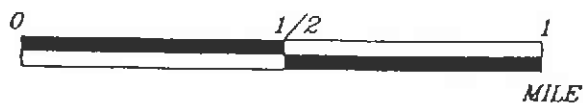
W-INF1	= water influent before stripper or before tank	B	= Benzene	NA	= Not applicable
W-INF2	= water influent after stripper or after filters	T	= Toluene	NS	= Not sampled
W-INT	= water intermediate samples	E	= Ethylbenzene		
W-EFF	= water effluent samples	X	= Total Xylenes		
TPPHg	= Total purgeable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



20100001



APPROXIMATE SCALE



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



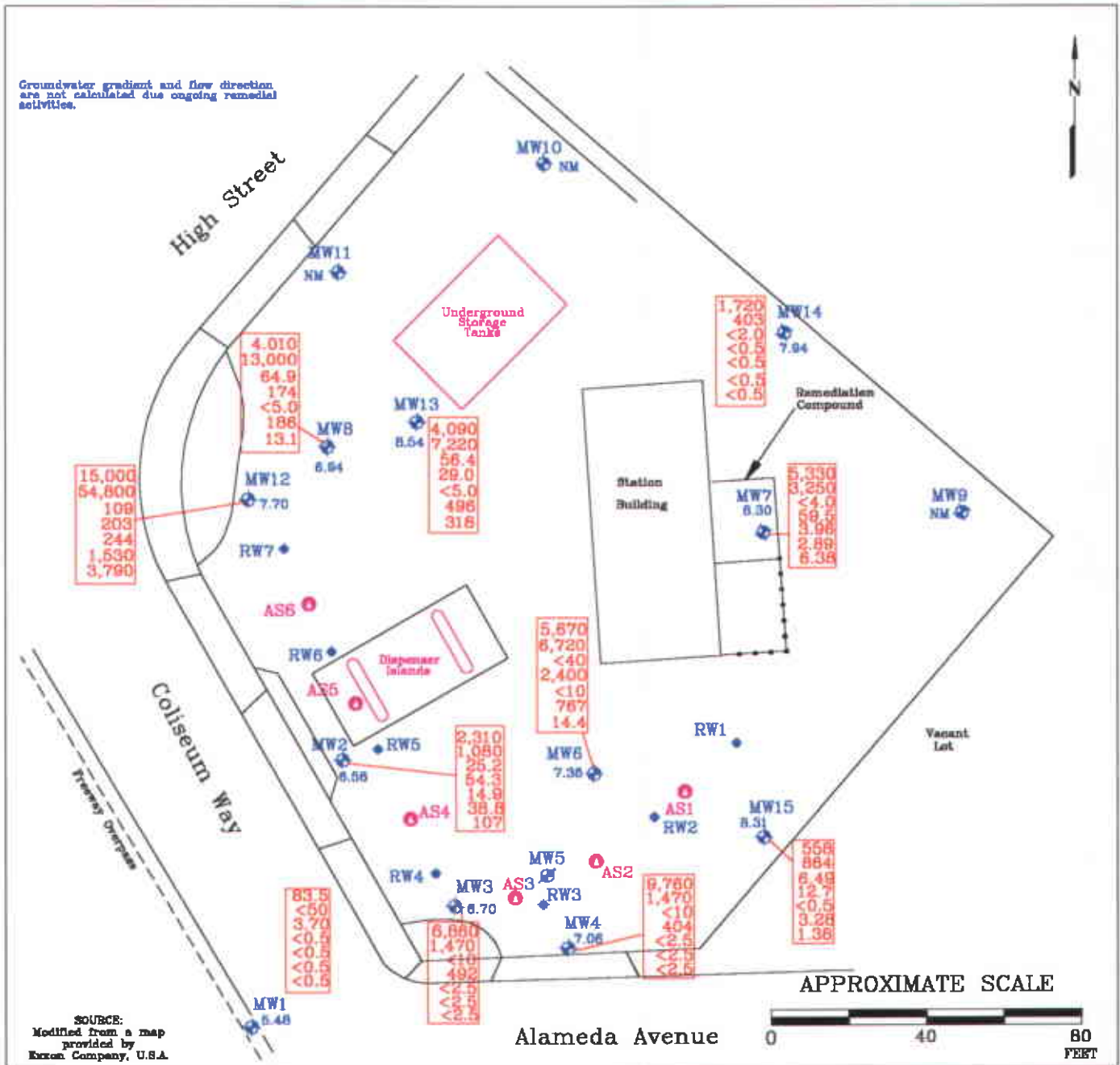
PROJECT ERI 2010

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 ongoing remedial activities.



SOURCE:
Modified from a map
provided by
Exxon Company, U.S.A.

APPROXIMATE SCALE



FN 20100002

EXPLANATION

Groundwater Concentrations in ug/L
Sampled June 22, 1999

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

15,000	Total Extractable Petroleum Hydrocarbons as diesel
54,800	Total Purgeable Petroleum Hydrocarbons as gasoline
108	Methyl Tertiary Butyl Ether
203	Benzene
244	Toluene
1,530	Ethylbenzene
3,780	Total Xylenes
<	Less Than the Stated Laboratory Detection Limit
ug/L	Micrograms per Liter
NA	Not Analyzed
NM	Not Measured



GENERALIZED SITE PLAN

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

PROJECT NO.

2010

PLATE

2

July 28, 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**



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

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

Sampled: 6/22/99
Received: 6/23/99
Reported: 7/15/99

ANALYTICAL REPORT FOR M906657

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	M906657-01	Water	6/22/99
MW-2	M906657-02	Water	6/22/99
MW-3	M906657-03	Water	6/22/99
MW-4	M906657-04	Water	6/22/99
MW-6	M906657-05	Water	6/22/99
MW-7	M906657-06	Water	6/22/99
MW-8	M906657-07	Water	6/22/99
MW-12	M906657-08	Water	6/22/99
MW-13	M906657-09	Water	6/22/99
MW-14	M906657-10	Water	6/22/99
MW-15	M906657-11	Water	6/22/99
TB	M906657-12	Water	6/22/99





Environmental Resolutions (Exxon)	Project: Exxon	Sampled: 6/22/99
75 Digital Drive, Suite 100	Project Number: 7-3006	Received: 6/23/99
Novato, CA 94949	Project Manager: Peter Petro	Reported: 7/15/99

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*
W-1 Diesel Range Hydrocarbons	9060507	6/29/99	7/9/99		0.0500	0.0835	Water mg/l	1
Surrogate: n-Pentacosane	"	"	"	50.0-150		102	%	
W-2 Diesel Range Hydrocarbons	9060507	6/29/99	7/9/99		0.0500	2.31	Water mg/l	2
Surrogate: n-Pentacosane	"	"	"	50.0-150		113	%	
W-3 Diesel Range Hydrocarbons	9060507	6/29/99	7/10/99		0.250	6.86	Water mg/l	3
Surrogate: n-Pentacosane	"	"	"	50.0-150		123	%	
W-4 Diesel Range Hydrocarbons	9060507	6/29/99	7/10/99		0.500	9.76	Water mg/l	4
Surrogate: n-Pentacosane	"	"	"	50.0-150		134	%	
W-6 Diesel Range Hydrocarbons	9060507	6/29/99	7/10/99		0.200	5.67	Water mg/l	1
Surrogate: n-Pentacosane	"	"	"	50.0-150		113	%	
W-7 Diesel Range Hydrocarbons	9060507	6/29/99	7/10/99		0.200	5.33	Water mg/l	1
Surrogate: n-Pentacosane	"	"	"	50.0-150		115	%	
W-8 Diesel Range Hydrocarbons	9060507	6/29/99	7/10/99		0.100	4.01	Water mg/l	1
Surrogate: n-Pentacosane	"	"	"	50.0-150		113	%	
W-12 Diesel Range Hydrocarbons	9060507	6/29/99	7/10/99		0.500	15.0	Water mg/l	1
Surrogate: n-Pentacosane	"	"	"	50.0-150		107	%	
W-13 Diesel Range Hydrocarbons	9060507	6/29/99	7/10/99		0.100	4.09	Water mg/l	1
Surrogate: n-Pentacosane	"	"	"	50.0-150		108	%	
W-14 Diesel Range Hydrocarbons	9060507	6/29/99	7/9/99		0.0500	1.72	Water mg/l	1
Surrogate: n-Pentacosane	"	"	"	50.0-150		111	%	
W-15 Diesel Range Hydrocarbons	9060507	6/29/99	7/9/99		0.0500	0.558	Water mg/l	1





Environmental Resolutions (Exxon)	Project: Exxon	Sampled: 6/22/99
73 Digital Drive, Suite 100	Project Number: 7-3006	Received: 6/23/99
Novato, CA 94949	Project Manager: Peter Petro	Reported: 7/15/99

**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*
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<u>W-15 (continued)</u>	<u>M906657-11</u>				<u>Water</u>			
Surrogate: <i>n</i> -Pentacosane	9060507	6/29/99	7/9/99	50.0-150		95.0	%	





Environmental Resolutions (Exxon) 73 Digital Drive, Suite 100 Novato, CA 94949	Project: Exxon Project Number: 7-3006 Project Manager: Peter Petro	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/15/99
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Diesel Hydrocarbons - Diesel Range Hydrocarbons (DHS) (Chain 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: 9060507	Date Prepared: 6/29/99	Extraction Method: EPA 3520B								
Blank	9060507-BLK1									
Diesel Range Hydrocarbons	7/9/99			0.0951	mg/l	0.0500				5
Surrogate: n-Pentacosane	"	0.100		0.100	"	50.0-150	100			
CS Dup	9060507-BSD1									
Diesel Range Hydrocarbons	7/9/99	1.00		1.03	mg/l	60.0-140	103	50.0		6
Surrogate: n-Pentacosane	"	0.100		0.104	"	50.0-150	104			





Environmental Resolutions (Exxon)	Project: Exxon	Sampled: 6/22/99
73 Digital Drive, Suite 100	Project Number: 7-3006	Received: 6/23/99
Novato, CA 94949	Project Manager: Peter Petro	Reported: 7/15/99

Notes and Definitions

Note

- 1 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
- Chromatogram Pattern: Weathered Diesel C9-C24 + Unidentified Hydrocarbons C9-C24
- 3 Chromatogram Pattern: Weathered Diesel C9-24 + Unidentified Hydrocarbons [C15-C24]
- Chromatogram Pattern: Weathered Diesel C9-C24
- MB is slightly contaminated, use sample M906785-04 for batch validation.
- 6 LCS was lost in extractions use the LCSD fo batch validation.
- ET 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: ERI / Exxon

Page 1 of 2

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

Site Location: 720 High St, Oakland

Project #: 201013

Consultant Project #: 990622-01

Consultant Work Release #:

Project Contact: Peter Petro

Phone #:

Laboratory Work Release #: 19432503

EXXON Contact: Marla Guensler

Phone #: (925) 246-8776

EXXON RAS #: 7-3006

Sampled by (print): Layne Row

Sampler's Signature: Layne Row

M 906657

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	TKI Vials Prs Anl #	# of Cont.	Sequoia's Sample #	TPH/Gas	TPH/Diesel	TRPH	MTBE	Temperature: _____	Inbound Seal: Yes No	Outbound Seal: Yes No
							BTEX/8015/8020	EPA 8015	S.M. 5520	(8020)			
MW-1	6-22-99	11:10	Water	X	5		X	X		X			
MW-2		11:56		X	5		X	X		X			
MW-3		14:25		X	5		X	X		X			
MW-4		13:26		X	5		X	X		X			
MW-6		15:22		X	5		X	X		X			
MW-7		13:53		X	5		X	X		X			
MW-8		15:54		X	5		X	X		X			
MW-12		16:15		X	5		X	X		X			
MW-13		14:57		X	5		X	X		X			

RELINQUISHED BY / AFFILIATION

Date

Time

ACCEPTED / AFFILIATION

Date

Time

Additional Comments

Layne Row / BTS
[Signature]

6/23/99

9:22

[Signature]

6/23/99

9:22

6/23/99

[Signature]

6/23/99

White - Sequoia Valley - Semina



Seq. Analyt
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 77002-7428

CHAIN OF CUSTODY

Consultant's Name: ERI / Exxon

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

Site Location: 720 High St. Oakland

Project #: 201013

Consultant Project #: 990622-01

Consultant Work Release #:

Project Contact: Peter Petro

Phone #:

Laboratory Work Release #: 19432503

EXXON Contact: Marla Guensler

Phone #: (925) 246-8776

EXXON RAS #: 7-3006

Sampled by (print): Layne Kov

Sampler's Signature: Layne K

M90657

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	HCl Pres NP	# of Cont.	Sequoia's Sample #	TPH/Gas	TPH/Diesel	TRPH	MTBE	Temperature: _____
							BTEX/ 8015/ 8020	EPA 8015	S.M. 5520	(8020)	
<u>MW-M</u>	<u>6-22-99</u>	<u>11:35</u>	<u>water</u>	<u>X</u>	<u>5</u>		<u>X</u>	<u>X</u>		<u>X</u>	Inbound Seal: Yes No Outbound Seal: Yes No
<u>MW-115</u>	<u>" "</u>	<u>13:04</u>	<u> </u>	<u>X</u>	<u>5</u>		<u>X</u>	<u>X</u>		<u>X</u>	
<u>TB</u>	<u>6-22-99</u>	<u>N/A</u>	<u> </u>				<u>X</u>			<u>X</u>	

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<u>Layne Kov</u> / BTS	<u>6/23/99</u>	<u>9:22</u>	<u>John</u>	<u>6/23/99</u>	<u>9:22</u>	
<u>John</u>	<u>6/25/97</u>	<u>1:35</u>				
			<u>William</u>			

White - Sequoia
Yellow - Saminis
Blue - Client



Sequoia Analytical

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

July 9, 1999

Ron Chew
Sequoia Analytical - Morgan Hill
885 Jarvis Drive
Morgan Hill, CA 95037

RE: Ron Chew/P907027

Dear Ron Chew:

Enclosed are the results of analyses for sample(s) received by the laboratory on June 23, 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





Sequoia Analytical - Morgan Hill
85 Jarvis Drive
Morgan Hill, CA 95037

Project: Ron Chew
Project Number: M906657
Project Manager: Ron Chew

Sampled: 6/22/99
Received: 6/23/99
Reported: 7/9/99

ANALYTICAL REPORT FOR P907027

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1/M906657-01	P907027-01	Water	6/22/99
MW-2/M906657-02	P907027-02	Water	6/22/99
MW-3/M906657-03	P907027-03	Water	6/22/99
MW-4/M906657-04	P907027-04	Water	6/22/99
MW-6/M906657-05	P907027-05	Water	6/22/99
MW-7/M906657-06	P907027-06	Water	6/22/99
MW-8/M906657-07	P907027-07	Water	6/22/99
MW-12/M906657-08	P907027-08	Water	6/22/99
MW-13/M906657-09	P907027-09	Water	6/22/99
MW-14/M906657-10	P907027-10	Water	6/22/99
MW-15/M906657-11	P907027-11	Water	6/22/99
TB/M906657-12	P907027-12	Water	6/22/99





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: MW-1/M906657-01
 Laboratory Sample Number: P907027-01

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	9070067	7/3/99	7/3/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	3.70	"	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	"	"	65.0-135		111	%	
Surrogate: <i>4-Bromofluorobenzene</i>	"	"	"	65.0-135		90.0	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
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Sample Description: MW-2/M906657-02
 Laboratory Sample Number: P907027-02

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	9070067	7/3/99	7/3/99		50.0	1080	ug/l	
Benzene	"	"	"		0.500	54.3	"	
Toluene	"	"	"		0.500	14.9	"	
Ethylbenzene	"	"	"		0.500	38.8	"	
Xylenes (total)	"	"	"		0.500	107	"	
Methyl tert-butyl ether	"	"	"		2.00	25.2	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		110	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		99.0	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
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Sample Description: MW-3/M906657-03
 Laboratory Sample Number: P907027-03

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	9070067	7/3/99	7/3/99		250	1470	ug/l	
Benzene	"	"	"		2.50	492	"	
Toluene	"	"	"		2.50	ND	"	
Ethylbenzene	"	"	"		2.50	ND	"	
Xylenes (total)	"	"	"		2.50	ND	"	
Methyl tert-butyl ether	"	"	"		10.0	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		102	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		97.0	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: MW-4/M906657-04
 Laboratory Sample Number: P907027-04

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

<u>Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M</u>								
Gasoline	9070067	7/3/99	7/3/99		250	1470	ug/l	
Benzene	"	"	"		2.50	404	"	
Toluene	"	"	"		2.50	ND	"	
Ethylbenzene	"	"	"		2.50	ND	"	
Xylenes (total)	"	"	"		2.50	ND	"	
Methyl tert-butyl ether	"	"	"		10.0	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		108	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		99.7	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: **MW-6/M906657-05**
Laboratory Sample Number: **P907027-05**

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

Sequoia Analytical - Petaluma

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

Gasoline	9070067	7/3/99	7/3/99		1000	6720	ug/l	
Benzene	"	"	"		10.0	2400	"	
Toluene	"	"	"		10.0	ND	"	
Ethylbenzene	"	"	"		10.0	767	"	
Xylenes (total)	"	"	"		10.0	14.4	"	
Methyl tert-butyl ether	"	"	"		40.0	ND	"	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	"	"	65.0-135		111	%	
Surrogate: <i>4-Bromofluorobenzene</i>	"	"	"	65.0-135		98.3	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: MW-7/M906657-06
 Laboratory Sample Number: P907027-06

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

<u>Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M</u>								
Gasoline	9070067	7/3/99	7/3/99		100	3250	ug/l	
Benzene	"	"	"		1.00	59.5	"	
Toluene	"	"	"		1.00	3.96	"	
Ethylbenzene	"	"	"		1.00	2.89	"	
Xylenes (total)	"	"	"		1.00	6.38	"	
Methyl tert-butyl ether	"	"	"		4.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		112	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		112	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: MW-8/M906657-07
 Laboratory Sample Number: P907027-07

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	9070067	7/3/99	7/3/99		500	13000	ug/l	
Benzene	"	"	"		5.00	174	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	186	"	
Xylenes (total)	"	"	"		5.00	13.1	"	
Methyl tert-butyl ether	"	"	"		20.0	64.9	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		110	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		102	"	





Sequoia Analytical - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
---	---	---

Sample Description: **MW-12/M906657-08**
Laboratory Sample Number: **P907027-08**

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	9070067	7/3/99	7/3/99		500	54800	ug/l	1
Benzene	"	"	"		5.00	203	"	
Toluene	"	"	"		5.00	244	"	
Ethylbenzene	"	"	"		5.00	1530	"	
Xylenes (total)	"	"	"		5.00	3790	"	
Methyl tert-butyl ether	"	"	"		20.0	109	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		103	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		109	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: **MW-13/M906657-09**
 Laboratory Sample Number: **P907027-09**

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	9070067	7/3/99	7/3/99		500	7220	ug/l	
Benzene	"	"	"		5.00	29.0	"	
Toluene	"	"	"		5.00	ND	"	
Ethylbenzene	"	"	"		5.00	496	"	
Xylenes (total)	"	"	"		5.00	318	"	
Methyl tert-butyl ether	"	"	"		20.0	56.4	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		110	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		97.0	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: MW-14/M906657-10
 Laboratory Sample Number: P907027-10

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	9070067	7/3/99	7/3/99		50.0	403	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		109	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		98.7	"	





Sequoia Analytical - Morgan Hill 85 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
--	---	---

Sample Description: **MW-15/M906657-11**
 Laboratory Sample Number: **P907027-11**

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	9070067	7/3/99	7/3/99		50.0	864	ug/l	
Benzene	"	"	"		0.500	12.7	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	3.28	"	
Xylenes (total)	"	"	"		0.500	1.38	"	
Methyl tert-butyl ether	"	"	"		2.00	6.49	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		104	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		100	"	

Sequoia Analytical - Petaluma *Refer to end of report for text of notes and definitions.





Sequoia Analytical - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
---	---	---

Sample Description: **TB/M906657-12**
 Laboratory Sample Number: **P907027-12**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9070067	7/3/99	7/3/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	"	"	65.0-135		109	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		95.7	"	





Sequoia Analytical - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037	Project: Ron Chew Project Number: M906657 Project Manager: Ron Chew	Sampled: 6/22/99 Received: 6/23/99 Reported: 7/9/99
---	---	---

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: 9070067			Date Prepared: 7/3/99		Extraction Method: EPA 5030 waters					
Blank <u>9070067-BLK1</u>										
Gasoline	7/3/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: <i>a,a,a</i> -Trifluorotoluene	"	300		327	"	65.0-135	109			
Surrogate: 4-Bromofluorobenzene	"	300		302	"	65.0-135	101			
ICS <u>9070067-BS1</u>										
Gasoline	7/3/99	1000		1010	ug/l	65.0-135	101			
Surrogate: 4-Bromofluorobenzene	"	300		296	"	65.0-135	98.7			
Matrix Spike <u>9070067-MS1</u> <u>P907027-01</u>										
Gasoline	7/6/99	1000	ND	878	ug/l	65.0-135	87.8			
Surrogate: 4-Bromofluorobenzene	"	300		295	"	65.0-135	98.3			
Matrix Spike Dup <u>9070067-MSD1</u> <u>P907027-01</u>										
Gasoline	7/3/99	1000	ND	929	ug/l	65.0-135	92.9	20.0	5.64	
Surrogate: 4-Bromofluorobenzene	"	300		289	"	65.0-135	96.3			





Sequoia Analytical - Morgan Hill
85 Jarvis Drive
Morgan Hill, CA 95037

Project: Ron Chew
Project Number: M906657
Project Manager: Ron Chew

Sampled: 6/22/99
Received: 6/23/99
Reported: 7/9/99

Notes and Definitions

Note

Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

ET 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 - Morgan Hill Subcontract Order
M906657

P907027

Sending Laboratory	Receiving Laboratory
Sequoia Analytical - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037 Phone: 408-776-9600 Fax: 408-782-6308 Project Manager: Ron Chew	Sequoia Analytical - Petaluma 1455 N. McDowell Blvd Ste D Petaluma, CA 94954 Phone: 707-792-1865 Fax: 707-792-0342

Subcontract Order Comments

7/23/99 14:00

COOLER CUSTODY SEALS INTACT NOT INTACT
 COOLER TEMPERATURE 12 °C

Sample/Analysis Information

Sample Name	Matrix	Sampled/ Expires	Analysis Requested	Due	Lab Number	Container	Comments
M906657-01	Water	6/22/99			P907027-01	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-02	Water	6/22/99			-02	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-03	Water	6/22/99			-03	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-04	Water	6/22/99			-04	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-05	Water	6/22/99			-05	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-06	Water	6/22/99			-06	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-07	Water	6/22/99			-07	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-08	Water	6/22/99			-08	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-09	Water	6/22/99			-09	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-10	Water	6/22/99			-10	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-11	Water	6/22/99			-11	C, D, E	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA
M906657-12	Water	6/22/99			-12	A, B	
		7/6/99	TPH-G/B/M	7/8/99			SUBOUT TO PETALUMA

Released By _____ Date _____ Received By _____ Date _____

Released By _____ Date _____ Received By [Signature] Date 14:00 7/16/99 (Page 1 of 1)



**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954
San Carlos, CA 94070-4111

(650) 364-9600	FAX (650) 364-9233
(925) 988-9600	FAX (925) 988-9673
(916) 921-9600	FAX (916) 921-0100
(707) 792-1865	FAX (707) 792-0342
(650) 232-9600	FAX (650) 232-9612

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

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

Received: 04/16/99

Lab Proj. ID: 9904571

Reported: 04/22/99

LABORATORY NARRATIVE

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

SEQUOIA ANALYTICAL

Vickie Tague Clark
Project Manager



Sequoia Analytical

680 Chesapeake Drive
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 819 Striker Avenue, Suite 8
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 1551 Industrial Road

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 FAX (707) 792-0342
 FAX (650) 232-9612

Environmental Resolutions 73 Digital Drive, Suite 100 Novato, CA 94949	Client Proj. ID: Exxon 7-3006, 201011X Sample Descript: A-Inf Matrix: AIR Analysis Method: 8015Mod/8020 Lab Number: 9904571-01	Sampled: 04/16/99 Received: 04/16/99 Analyzed: 04/19/99 Reported: 04/22/99
--	--	---

GC Batch Number: GC041999BTEX02A
 Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	88

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

SEQUOIA ANALYTICAL - ELAP #1210


 Vickie Tague Clark
 Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D
1551 Industrial Road

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Walnut Creek, CA 94598
Sacramento, CA 95834
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FAX (916) 921-0100
FAX (707) 792-0342
FAX (650) 232-9612

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

Attention: Peter Petro

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

Sampled: 04/16/99
Received: 04/16/99
Analyzed: 04/19/99
Reported: 04/22/99

Batch Number: GC041999BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10	N.D.
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	88

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

SEQUOIA ANALYTICAL - ELAP #1210

Vickie Tague Clark
Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
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1551 Industrial Road

Redwood City, CA 94063
Walnut Creek, CA 94598
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FAX (650) 232-9612

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

Client Project ID: Exxon 7-3006, 201011x

QC Sample Group: 9904571

Reported: Apr 22, 1999

QUALITY CONTROL DATA REPORT

Matrix: Liquid
Method: EPA 8020
Analyst: JAB

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
---------	---------	---------	--------------	---------

QC Batch #: GC041999BTEX02A

Sample No.: GW9904491-3

Date Prepared: 4/19/99 4/19/99 4/19/99 4/19/99

Date Analyzed: 4/19/99 4/19/99 4/19/99 4/19/99

Instrument I.D.#: GCHP02 GCHP02 GCHP02 GCHP02

Sample Conc., ug/L: N.D. N.D. N.D. N.D.

Conc. Spiked, ug/L: 10 10 10 30

Matrix Spike, ug/L: 8.1 8.2 8.4 24

% Recovery: 81 82 84 80

Matrix

pike Duplicate, ug/L: 8.7 8.6 8.6 26

% Recovery: 87 86 86 87

Relative % Difference: 7.1 4.8 2.4 8.4

RPD Control Limits: 0-25 0-25 0-25 0-25

LCS Batch#: GC041999BTEX02A

Date Prepared: 4/19/99 4/19/99 4/19/99 4/19/99

Date Analyzed: 4/19/99 4/19/99 4/19/99 4/19/99

Instrument I.D.#: GCHP02 GCHP02 GCHP02 GCHP02

Conc. Spiked, ug/L: 10 10 10 30

LCS Recovery, ug/L: 9.1 9.1 9.1 27

LCS % Recovery: 91 91 91 90

Percent Recovery Control Limits:


MSMSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

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

Please Note:

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

SEQUOIA ANALYTICAL


Ronald M. Chew
Project Manager



660 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 Regulations Inc.

Page 1 of 1

Address: 73 Digital Drive #100 Novato Ca 94949

Site Location: 720 High St.

Project #:

Consultant Project #: 201011X

Consultant Work Release #: 19932503

Project Contact: Peter Petro

Phone #: (415) 382-9105

Laboratory Work Release #:

EXXON Contact: Marla Guender

Phone #: (925) 246-8776

EXXON RAS #: 7-3006

Sampled by (print): Joel Dyer

Sampler's Signature: Joel Dyer

Oakland, CA.

Shipment Method:

Air Bill #:

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

ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	ANALYSIS REQUIRED			Temperature: _____	Inbound Seal: Yes No Outbound Seal: Yes No	
							TPH/Gas BTEX/8015/8020	TPH/Diesel EPA 8015	TRPH S.M. 5520			
<u>A Inp</u>	<u>2/16/99</u>	<u>12:15</u>	<u>Air</u>		<u>1</u>	<u>01</u>	<u>X</u>					
<u>A-Exp</u>	<u>2/16/99</u>	<u>12:14</u>	<u>Air</u>		<u>2</u>	<u>02</u>	<u>X</u>					

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<u>Joel Dyer / ERI</u>						
 			 			
			<u>Joel Dyer / Sequoia</u>	<u>4/16/99</u>	<u>1340</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

May 17, 1999

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

RE: Exxon/P905279

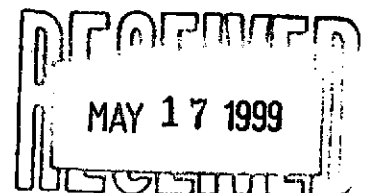
Dear Peter Petro:

Enclosed are the results of analyses for sample(s) received by the laboratory on May 13, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matt Sakai
Project Manager

CA ELAP Certificate Number 2245





75 Digital Dr. Suite 6 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 5/13/99 Received: 5/13/99 Reported: 5/17/99
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ANALYTICAL REPORT FOR P905279

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
A-INF	P905279-01	Air	5/13/99
A-ff	P905279-02	Air	5/13/99





Sequoia Analytical

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

75 Digital Dr. Suite 6 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 5/13/99 Received: 5/13/99 Reported: 5/17/99
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Sample Description: A-INF
 Laboratory Sample Number: P905279-01

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	9050346	5/13/99	5/13/99		10.0	ND	ug/l	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		93.3	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		99.7	"	





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79 Digital Dr. Suite 6 Novato, CA 94949	Project: Exxon	Sampled: 5/13/99
	Project Number: 201011X/7-3006	Received: 5/13/99
	Project Manager: Peter Petro	Reported: 5/17/99

Sample Description: A-Eff
 Laboratory Sample Number: P905279-02

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	9050346	5/13/99	5/13/99		10.0	ND	ug/l	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	ND	"	
Ethylbenzene	"	"	"		0.100	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		92.0	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		97.3	"	





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75 Digital Dr. Suite 6 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 5/13/99 Received: 5/13/99 Reported: 5/17/99
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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*
Batch: 9050346		Date Prepared: 5/13/99		Extraction Method: EPA 5030 waters						
Blank		9050346-BLK1								
Gasoline	5/13/99			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		285	"	65.0-135	95.0			
Surrogate: 4-Bromofluorobenzene	"	300		287	"	65.0-135	95.7			
LCS		9050346-BS1								
Gasoline	5/13/99	1000		968	ug/l	65.0-135	96.8			
Surrogate: 4-Bromofluorobenzene	"	300		291	"	65.0-135	97.0			
Matrix Spike		9050346-MS1		P905154-07						
Gasoline	5/13/99	1000	87.8	1030	ug/l	65.0-135	94.2			
Surrogate: 4-Bromofluorobenzene	"	300		281	"	65.0-135	93.7			
Matrix Spike Dup		9050346-MSD1		P905154-07						
Gasoline	5/13/99	1000	87.8	1040	ug/l	65.0-135	95.2	20.0	1.06	
Surrogate: 4-Bromofluorobenzene	"	300		266	"	65.0-135	88.7			





RI Digital Dr. Suite 6 Novato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 5/13/99 Received: 5/13/99 Reported: 5/17/99
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Notes and Definitions

Note

- DET Analyte DETECTED
- D Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- y Sample results reported on a dry weight basis
- Recov. Recovery
- RD 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

9905279

Consultant's Name: <u>Environmental Resolutions Inc.</u>		Page <u>1</u> of <u>1</u>
Address: <u>73 Digital Dr Suite 100 Novato Ca 94949</u>		Site Location: <u>720 High St.</u>
Project #:	Consultant Project #: <u>201011X</u>	Consultant Work Release #: <u>19432503</u>
Project Contact: <u>Peter Petro</u>	Phone #: <u>(415) 382-9105</u>	Laboratory Work Release #:
EXXON Contact: <u>Marla Guenster</u>	Phone #: <u>(925) 246-8776</u>	EXXON RAS #: <u>7-3006</u>
Sampled by (print): <u>Joel Dyer</u>	Sampler's Signature: <u>Joel Dyer</u>	<u>Oakland Ca</u>
Shipment Method:	Air Bill #:	

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

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	ANALYSIS REQUIRED			Temperature: _____	
							TPH/Gas BTEX/ 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520	Inbound Seal: Yes No	Outbound Seal: Yes No
A-Inf	5/13/99	10:16	fir		1	-01	X				
A-EA	5/13/99	10:15	Air		1	-02	X				

COOLER CUSTODY SEALS INTACT NOT INTACT 1/2
 COOLER TEMPERATURE 22 °C

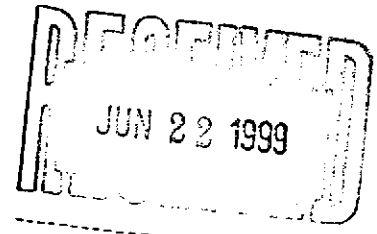
RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<u>Joel Dyer / ERI</u>			<u>Chris [unclear]</u>	5-13-99	1530	
<u>[unclear]</u>	5-13-99	1645	<u>Jan [unclear]</u>	5/13/99	1645	

Pink - Client
Yellow - Sequoia
White - Sequoia



Sequoia Analytical

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



June 22, 1999

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

RE: Exxon/P906525

Dear Peter Petro:

Enclosed are the results of analyses for sample(s) received by the laboratory on June 18, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matt Sakai
Project Manager

CA ELAP Certificate Number 2245





FRI	Project: Exxon	Sampled: 6/17/99
Digital Dr. Suite 100	Project Number: 201011X/7-3006	Received: 6/18/99
Novato, CA 94949	Project Manager: Peter Petro	Reported: 6/22/99

ANALYTICAL REPORT FOR P906525

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
INF/7-3006	P906525-01	Air	6/17/99
EFF/7-3006	P906525-02	Air	6/17/99





ERI	Project: Exxon	Sampled: 6/17/99
Digital Dr. Suite 100	Project Number: 201011X/7-3006	Received: 6/18/99
Petaluma, CA 94949	Project Manager: Peter Petro	Reported: 6/22/99

Sample Description: A-INF/7-3006
 Laboratory Sample Number: P906525-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - Petaluma								
Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M								
Gasoline	9060550	6/18/99	6/18/99		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		93.0	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		98.3	"	





FRI	Project: Exxon	Sampled: 6/17/99
Digital Dr. Suite 100	Project Number: 201011X/7-3006	Received: 6/18/99
Petaluma, CA 94949	Project Manager: Peter Petro	Reported: 6/22/99

Sample Description: A-EFF/7-3006
Laboratory Sample Number: P906525-02

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	9060550	6/18/99	6/18/99		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		92.0	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		96.7	"	





ERI	Project: Exxon	Sampled: 6/17/99
Digital Dr. Suite 100	Project Number: 201011X/7-3006	Received: 6/18/99
Petaluma, CA 94949	Project Manager: Peter Petro	Reported: 6/22/99

**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: 9060550			Date Prepared: 6/18/99		Extraction Method: EPA 5030 waters					
Blank										
Gasoline	6/18/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
o-xylbenzene	"			ND	"	0.500				
m-xylenes (total)	"			ND	"	0.500				
Surrogate: a,a,a-Trifluorotoluene	"	300		285	"	65.0-135	95.0			
Surrogate: 4-Bromofluorobenzene	"	300		294	"	65.0-135	98.0			
LCS										
9060550-BS1										
Gasoline	6/18/99	1000		962	ug/l	65.0-135	96.2			
Surrogate: 4-Bromofluorobenzene	"	300		310	"	65.0-135	103			
Matrix Spike										
9060550-MS1 P906464-01										
Gasoline	6/18/99	1000	ND	929	ug/l	65.0-135	92.9			
Surrogate: 4-Bromofluorobenzene	"	300		293	"	65.0-135	97.7			
Matrix Spike Dup										
9060550-MSD1 P906464-01										
Gasoline	6/18/99	1000	ND	882	ug/l	65.0-135	88.2	20.0	5.19	
Surrogate: 4-Bromofluorobenzene	"	300		289	"	65.0-135	96.3			





ERI 4 Digital Dr. Suite 100 ovato, CA 94949	Project: Exxon Project Number: 201011X/7-3006 Project Manager: Peter Petro	Sampled: 6/17/99 Received: 6/18/99 Reported: 6/22/99
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Notes and Definitions

#	Note
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ET Analyte DETECTED

D Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

ry Sample results reported on a dry weight basis

Recov. Recovery

PD Relative Percent Difference





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

1906525

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 DRIVE NOVATO CA 94949 Site Location: 720 HIGH ST

Project #: _____ Consultant Project #: 201011X Consultant Work Release #: 19A32503

Project Contact: PETER PETRO Phone #: (415) 382-9105 Laboratory Work Release #: _____

EXXON Contact: MARLA GUENSCHER Phone #: (925) 246-8716 EXXON RAS #: 7-3006

Sampled by (print): ROWAN FENNELL Sampler's Signature: [Signature] OAKLAND

Shipment Method: _____ Air Bill #: _____

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

ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/ 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520	Temperature: _____
A-INF	6/17/99	1315	AIR		1	1906525-01	X			
A-EFF	6/17/99	1315	AIR		1	↓ 02	X			

JULER CUSTODY SEALS INTACT NOT INTACT
 COOLER TEMPERATURE 22 °C

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
<u>[Signature]</u>			<u>[Signature]</u>	6-18-99	1500	
<u>[Signature]</u>	6-18-99	1700	<u>[Signature]</u>	6/18	1700	

Pink - Client
Yellow - Sequoia
White - Sequoia

ATTACHMENT C

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

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

Rev. JO'C

Rev. 4/29/97

**POUNDS OF HYDROCARBON IN AN VAPOR
STREAM**

INPUT DATA:

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

SAMPLE DATA AND CALCULATIONS

Date	Time	Temp deg F	Press in H ₂ O	HC conc mg/M ³ acfm	Vapor flow lb. rem.	Calc.
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 x 60 x 95 x 0.98 x 0.97 x 0.0283 x 1.050 x 1/454 = 7.4 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)