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ENVIRONMENTAL
PROTECTION

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EXXONMOBIL • REFINING AND SUPPLY
Safety, Health and Environment
Environmental Engineering

P.O. Box 4032 • Concord, CA 94524-4032

DARIN L. ROUSE
Senior Engineer

(925) 246-8768
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darin.l.rouse@exxon.com

#136

May 5, 2000

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

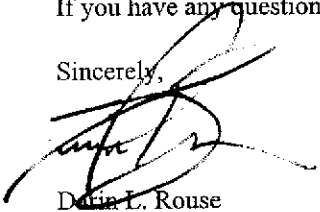
RE: Former Exxon RAS #7-3006/720 High Street, Oakland, California.

Dear Mr. Chan:

Attached for your review and comment is a letter report entitled *Quarterly Groundwater Monitoring and Remediation Status Report, First Quarter 2000*, dated May 1, 2000, for the above referenced site. The work plan was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details the results of 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,



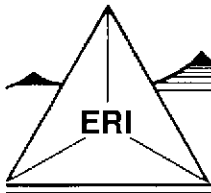
Darin L. Rouse
Senior Engineer

Attachment: ERI's Quarterly Groundwater Monitoring and Remediation Status Report, First Quarter 2000, dated May 1, 2000.

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

w/o attachment
Mr. James F. Chappell - Environmental Resolutions, Inc.





ENVIRONMENTAL RESOLUTIONS, INC.

May 1, 2000
ERI 201013.R23

Mr. Darin L. Rouse
ExxonMobil Corporation
P.O. Box 4032
Concord, California 94524-4032

Subject: Quarterly Groundwater Monitoring and Remediation Status Report, First Quarter 2000,
Former Exxon Service Station 7-3006, 720 High Street, Oakland, California.

Mr. Rouse:

At the request of ExxonMobil Corporation (formerly known as Exxon Company, U.S.A.) (ExxonMobil), Environmental Resolutions, Inc. (ERI) is reporting the results of first quarter 2000 groundwater monitoring and sampling activities at the subject site. The location of the site is shown on the Site Vicinity Map (Plate 1). The purpose of quarterly monitoring and sampling is to evaluate concentrations of dissolved hydrocarbons in groundwater and the effectiveness of remedial actions. The locations of selected site features are shown on the Generalized Site Plan (Plate 2). Blaine Tech Services, Inc. (Blaine Tech) performed the groundwater monitoring and sampling activities and ERI performed operation and maintenance activities.

GROUNDWATER MONITORING AND SAMPLING

On March 21, 2000, Blaine Tech measured the depth to water (DTW) and collected groundwater samples from select wells for laboratory analysis. Groundwater monitoring and sampling were performed in accordance with Blaine Tech's groundwater sampling protocol (Attachment A).

Calculated groundwater gradient and flow direction are presented on Plate 2. Historical and recent monitoring data are summarized in Table 1.

Laboratory Analyses and Results

Groundwater samples were submitted to Southern Petroleum Laboratories, Inc. (SPL), 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 report and Chain of Custody record are attached (Attachment B).

SOIL AND GROUNDWATER REMEDIATION

Air Sparge/Soil Vapor Extraction

ERI initiated operation of the air sparge/soil vapor extraction (AS/SVE) system in August 1996, utilizing the thermal/catalytic oxidizer. The AS/SVE system was shut down July 28, 1999. Cumulative operational and performance data are presented in Table 2.

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.

should extract via sparge

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, in order to recover groundwater from the interceptor trench. Subsurface and above-ground collection piping were used to transfer extracted groundwater to a holding tank. A transfer pump and polyvinyl chloride (PVC) piping were used to direct the water stream from the holding tank through water filters, an air stripper, and subsequently through liquid-phase granular activated carbon (GAC) canisters connected in series. The treated groundwater was discharged to the sanitary sewer regulated by East Bay Municipal Utilities District (EBMUD).

The GRS system was shut down on December 23, 1998. Cumulative GRS flow rates, total volume extracted, and influent, intermediate, and effluent sample concentrations are presented in Table 3.

SUMMARY AND STATUS OF INVESTIGATION

Site closure is being pursued and quarterly groundwater monitoring and sampling will continue. 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
To Date:	5,144	845

The GRS was not operational during the first quarter 2000. 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
To Date:	10	2

How can any be removed if systems shut down

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 ExxonMobil, and any reliance on this report by third parties shall be at such party's sole risk.

ERI recommends forwarding copies of this report to:

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

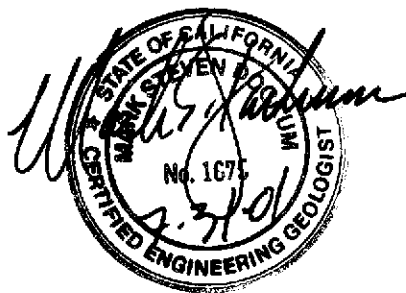
Mr. Stephen Hill
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Please call Mr. James Chappell at (415) 382-4323 with any questions regarding this project.

Sincerely,
Environmental Resolutions, Inc.



James F. Chappell
Senior Staff Scientist



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 Report and Chain of Custody Record
 - 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 1 of 15)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet.....>	Elev.	TEPHd <.....>	TPPHg <.....>	MTBE <.....>	B <.....>	T <.....>	E <.....>	X <.....>	VOCs <.....>	EHCss <.....>	TOG <.....>
MW1	1/20/94	NLPH	9.25	3.62	---	---	---	---	---	---	---	---	---	---
(12.87)	02/02-03/94	NLPH	8.60	4.27	70	<50	---	<0.5	<0.5	<0.5	0.7	---	---	---
	3/10/94	NLPH	8.31	4.56	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	7.95	4.92	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	7.48	5.39	100	<50	---	<0.5	<0.5	<0.5	1.6	---	---	---
	6/27/94	NLPH	7.65	5.22	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	9.39	3.48	---	---	---	---	---	---	---	---	---	---
	9/29/94	NLPH	9.83	3.04	<50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/25/94	NLPH	10.19	2.68	---	<50	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/30/94	NLPH	8.97	3.90	---	---	---	---	---	---	---	---	---	---
	12/27/94	NLPH	7.44	5.43	---	---	---	---	---	---	---	---	---	---
	2/6/95	NLPH	5.71	7.16	---	<50	100	0.52	<0.5	<0.5	<0.5	---	---	---
	6/7/95	NLPH	7.62	5.25	81	<50	3.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/18/95	NLPH	10.02	2.85	82	<50	6	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/1/95	NLPH	10.74	2.13	160	<50	8.9	<0.5	<0.5	<0.5	<0.5	---	---	---
	2/14/96	NLPH	7.81	5.06	100	<50	7.8	<0.5	<0.5	<0.5	<0.5	---	---	---
	6/19/96	NLPH	7.47	5.40	93	<50	7.1	<0.5	<0.5	<0.5	<0.5	---	<50	---
	9/24/96	NLPH	10.42	2.45	83	<50	9.5	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/11/96	NLPH	8.50	4.37	81	<50	7.2	<0.5	<0.5	<0.5	<0.5	---	---	---
	3/19/97	NLPH	9.14	3.73	78	<50	6.4	<0.5	<0.5	<0.5	<0.5	---	---	---
	6/4/97	NLPH	9.82	3.05	58	<50	6.0	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/2/97	NLPH	10.26	2.61	150	<50	5.4	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/2/97	NLPH	9.32	3.55	88	<50	5.1	<0.5	<0.5	<0.5	<0.5	---	---	---
	3/24/98	NLPH	6.44	6.43	58	<50	5.6	<0.5	<0.5	<0.5	<0.5	---	---	---
	6/23/98	NLPH	9.23	3.64	84	<50	3.8	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/29/98	NLPH	9.91	2.96	61	<50	2.6	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/30/98	NLPH	9.21	3.66	80	<50	4.1	<0.5	<0.5	<0.5	<0.5	---	---	---
	3/24/99	NLPH	5.53	7.34	64.3	<50	4.95	<0.5	<0.5	<0.5	<0.5	---	---	---
	6/22/99	NLPH	7.39	5.48	83.5	<50	3.70	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/29/99	NLPH	8.90	3.97	52.9	<50	4.81	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/21/99	NLPH	8.94	3.93	60	<50	10	<0.5	<0.5	<0.5	<0.5	---	---	---
	3/21/00	NLPH	5.34	7.53	---	<50	4.5	<0.5	<0.5	<0.5	<0.5	---	---	---

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 4 of 15)

Well ID # (TOC)	Sampling Date	SUBJ <.....feet.....>	DTW	Elev.	TEPHd	TPPhg	MTBE	B	T	E	X	VOCs	EHCss	TOG
<.....ug/l.....>														
MW4	1/20/94	--- [NR]	---	---	---	---	---	---	---	---	---	---	---	---
(12.77)	02/02-03/94	--- [1 c.]	---	---	---	---	---	---	---	---	---	---	---	---
	3/10/94	[8 c.]	7.12	5.65	---	---	---	---	---	---	---	---	---	---
	4/22/94	[10 c.]	---	---	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	[5 c.]	---	---	---	---	---	---	---	---	---	---	---	---
	6/27/94	0.01 [NR]	6.50	6.27	---	---	---	---	---	---	---	---	---	---
	8/31/94	0.02 [NR]	7.84	4.93	---	---	---	---	---	---	---	---	---	---
	9/29/94	0.03 [NR]	8.43	4.34	---	---	---	---	---	---	---	---	---	---
	10/25/94	Sheen	9.24	3.53	---	---	---	---	---	---	---	---	---	---
	11/30/94	---	6.77	6.00	---	---	---	---	---	---	---	---	---	---
	12/27/94	Sheen	6.14	6.63	---	---	---	---	---	---	---	---	---	---
	2/6/95	Sheen	4.87	7.90	---	---	---	---	---	---	---	---	---	---
	6/7/95	Sheen	6.91	5.86	---	---	---	---	---	---	---	---	---	---
	9/18/95	Sheen	9.59	3.18	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	11.52	1.25	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	8.56	4.21	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	6.09	6.68	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	10.20	2.57	---	---	---	---	---	---	---	---	---	---
	12/11/96	Sheen	7.78	4.99	---	---	---	---	---	---	---	---	---	---
	3/19/97	Sheen	8.56	4.21	---	---	---	---	---	---	---	---	---	---
	6/4/97	Sheen	9.31	3.46	---	---	---	---	---	---	---	---	---	---
	9/2/97	Sheen	10.00	2.77	---	---	---	---	---	---	---	---	---	---
	12/2/97	NLPH	8.72	4.05	15,000	1,500	50	<2.5	9.7	3.0	10	---	---	---
	3/24/98	NLPH	5.79	6.98	6,400	540	38	<0.5	4.4	1.6	5.4	---	---	---
	6/23/98	Sheen	8.50	4.27	7,500	1,000	25	3.3	<2.0	<2.0	<2.0	---	---	---
	9/29/98	Sheen	9.77	3.00	65,000	7,300	<50	<10	<10	<10	<10	---	---	---
	12/30/98	Sheen	8.54	4.23	12,000	1,000	170	3.8	5.1	<2.5	4.1	---	---	---
	3/24/99	Sheen	4.41	8.36	20,500	1,300	4.40	2.64	<1.0	<1.0	<1.0	---	---	---
	6/22/99	NLPH	5.71	7.06	9,760	1,470	<10	404	<2.5	<2.5	<2.5	---	---	---
	9/29/99	NLPH	7.32	5.45	2,470 ^f	589 ^f	8.12	12.6	<1.0	<1.0	<1.0	---	---	---
	12/21/99	NLPH	7.58	5.19	230,000	2,000	<2	<0.5	0.56	1.9	18.6	---	---	---
	1/26/00	NLPH	5.85	6.92	3,200 ^h	---	---	---	---	---	---	---	---	---
	3/21/00	NLPH	3.58	9.19	5,900	270	13	6.8	0.83	<0.5	3.6	---	---	---

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 6 of 15)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev. >.....<	TEPHd <.....>	TPPHg >.....<	MTBE >.....<	B >.....<	T ug/l.	E >.....<	X >.....<	VOCs >.....<	EHCss >.....<	TOG >.....<
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	---
	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	10.36	4.28	1,700	3,000	<13	2.7	11	25	<2.5	---	1,400	---
	2/14/96	NLPH	8.04	6.80	1,200	1,900	<25	59	<5.0	<5.0	<5.0	---	940	---
	6/19/96	NLPH	7.33	7.51	1,400	2,000	<25	96	<5.0	<5.0	5.6	ND	1,000	---
	9/24/96	NLPH	10.10	4.74	1,100	950	<25	6.8	<5.0	<5.0	<5.0	ND	910	---
	12/11/96	NLPH	8.50	6.34	1,600	2,500	<10	50	<2.0	6.4	30	ND	1,100	---
	3/19/97	NLPH	8.88	5.96	840	2,700	<25	61	8.0	21	68	ND	580	---
	6/4/97	NLPH	9.38	5.46	1,000	1,900	<2.5	45	<2.0	5.3	13	ND	780	---
	9/2/97	NLPH	9.69	5.15	790	1,700	<2.5	28	2.2	<2.0	5.9	ND	740	---
	12/2/97	NLPH	8.65	6.19	1,100	2,000	14	33	2.2	2.0	5.8	---	---	---
	3/24/98	NLPH	6.40	8.44	950	2,300	<25	73	<5.0	<5.0	22	---	---	---
	6/23/98	NLPH	8.34	6.50	1,600	4,700	140	50	<5.0	12	20	---	---	---
	9/29/98	NLPH	9.76	5.08	630	700	<5.0	2.7	1.3	2.4	5.3	---	---	---
	12/30/98	NLPH	8.86	5.98	1,700	1,400	<5.0	17	7.7	2.8	16	---	---	---
	3/24/99	Sheen	5.48	9.36	860	1,740	6.73	59.2	2.76	4.33	15.1	---	---	---
	6/22/99	NLPH	6.54	8.30	5,330	3,250	<4.0	59.5	3.96	2.89	6.38	---	---	---
	9/29/99	NLPH	8.45	6.39	1,750 ^P	1,360 ^P	<25	3.07	<2.5	5.02	6.32	---	---	---
	12/21/99	NLPH	8.39	6.45	4,600	2,900	<2	47	2	1.7	8.53	---	---	---
	3/21/00	NLPH	4.72	10.12	1,500	760	<2	43	2	2.2	10.8	---	---	---

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 7 of 15)

Well ID # (TOC)	Sampling Date	SUBJ <.....>	DTW feet	Elev.	TEPHd <.....>	TPPHg <.....>	MTBE <.....>	B <.....>	T ug/l	E <.....>	X <.....>	VOCs <.....>	EHCss <.....>	TOG <.....>
MW8	1/20/94	Sheen	8.90	4.55	---	---	---	---	---	---	---	---	---	---
(13.45)	02/02-03/94	Sheen	8.58	4.87	---	---	---	---	---	---	---	---	---	---
	3/10/94	Sheen	7.16	6.29	---	---	---	---	---	---	---	---	---	---
	4/22/94	Sheen	7.34	6.11	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	Sheen	7.04	6.41	---	---	---	---	---	---	---	---	---	---
	6/27/94	Sheen	6.01	7.44	---	---	---	---	---	---	---	---	---	---
	8/31/94	Sheen	9.26	4.19	---	---	---	---	---	---	---	---	---	---
	9/29/94	Sheen	9.76	3.69	---	---	---	---	---	---	---	---	---	---
	10/25/94	Sheen	10.05	3.40	---	---	---	---	---	---	---	---	---	---
	11/30/94	---	7.68	5.77	---	---	---	---	---	---	---	---	---	---
	12/27/94	Sheen	7.11	6.34	---	---	---	---	---	---	---	---	---	---
	2/6/95	Sheen	5.39	8.06	---	---	---	---	---	---	---	---	---	---
	6/7/95	Sheen	7.53	5.92	---	---	---	---	---	---	---	---	---	---
	9/18/95	Sheen	9.84	3.61	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	10.47	2.98	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	8.27	5.18	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	6.88	6.57	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	10.13	3.32	---	---	---	---	---	---	---	---	---	---
	12/11/96	Sheen	8.53	4.92	---	---	---	---	---	---	---	---	---	---
	3/19/97	Sheen	9.09	4.36	---	---	---	---	---	---	---	---	---	---
	6/4/97	Sheen	9.52	3.93	---	---	---	---	---	---	---	---	---	---
	9/2/97	NLPH	9.72	3.73	8,000	20,000	<50	57	<50	850	660	ND	---	---
	12/2/97	NLPH	8.83	4.62	2,700	6,900	130	83	<10	<10	100	---	---	---
	3/24/98	NLPH	6.52	6.93	2,900	10,000	<125	190	<25	470	330	---	---	---
	6/23/98	NLPH	9.02	4.43	3,700	10,000	<50	140	<10	460	260	---	---	---
	9/29/98	NLPH	9.72	3.73	3,600	12,000	130	46	<10	340	190	---	---	---
	12/30/98	NLPH	9.06	4.39	3,000	11,000	140	170	<25	230	160	---	---	---
	3/24/99	Sheen	5.21	8.24	2,250	13,000	22.6	336	53.2	415	326	---	---	---
	6/22/99	Sheen	6.51	6.94	4,010	13,000	64.9	174	<5.0	186	13.1	---	---	---
	9/29/99	NLPH	8.22	5.23	2,170 ^a	5,420	<25	20.4	<5.0	<5.0	38.5	---	---	---
	12/21/99	NLPH	8.41	5.04	2,100	4,700	<2	190	15	160	68.2	---	---	---
	3/21/00	NLPH	4.47	8.98	---	6,300	270	380	12	260	86	---	---	---

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	1/20/94	NLPH	7.81	4.80	---	---	---	---	---	---	---	---	---	---
(12.61)	02/02-03/94	NLPH	7.22	5.39	18,000	48,000	---	4,000	2,700	2,900	9,900	---	---	---
	3/10/94	NLPH	6.16	6.45	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	6.31	6.30	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	6.16	6.45	8,200	46,000	---	30,003	1,600	2,900	9,100	---	---	---
	6/27/94	NLPH	6.55	6.06	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	7.97	4.64	---	---	---	---	---	---	---	---	---	---
	9/29/94	Sheen	8.52	4.09	---	---	---	---	---	---	---	---	---	---
	10/25/94	Sheen	8.74	3.87	---	---	---	---	---	---	---	---	---	---
	11/30/94	---	8.73	3.88	---	---	---	---	---	---	---	---	---	---
	12/30/94	NLPH	6.17	6.44	---	---	---	---	---	---	---	---	---	---
	2/6/95	Sheen	4.44	8.17	---	---	---	---	---	---	---	---	---	---
	6/7/95	Sheen	6.59	6.02	---	---	---	---	---	---	---	---	---	---
	9/18/95	Sheen	8.96	3.65	---	---	---	---	---	---	---	---	---	---
	11/1/95	Sheen	10.75	1.86	---	---	---	---	---	---	---	---	---	---
	2/14/96	Sheen	7.73	4.88	---	---	---	---	---	---	---	---	---	---
	6/19/96	Sheen	5.80	6.81	---	---	---	---	---	---	---	---	---	---
	9/24/96	Sheen	9.14	3.47	---	---	---	---	---	---	---	---	---	---
	12/11/96	Sheen	7.31	5.30	---	---	---	---	---	---	---	---	---	---
	3/19/97	Sheen	9.96	2.65	---	---	---	---	---	---	---	---	---	---
	6/4/97	Sheen	8.81	3.80	---	---	---	---	---	---	---	---	---	---
	9/2/97	Sheen	8.93	3.68	---	---	---	---	---	---	---	---	---	---
	12/2/97	NLPH	8.41	4.20	3,900	45,000	<250	1,800	560	3,100	8,700	---	---	---
	3/24/98	NLPH	5.37	7.24	8,800	42,000	<250	820	280	2,800	6,800	---	---	---
	6/23/98	Sheen	8.43	4.18	7,800	39,000	560	1,000	200	2,300	4,900	---	---	---
	9/29/98	Sheen	8.94	3.67	21,000	40,000	<500	1,100	150	2,200	3,100	---	---	---
	12/30/98	Sheen	8.47	4.14	49,000	79,000	<500	1,400	400	3,300	8,500	---	---	---
	3/24/99	Sheen	3.71	8.90	5,070	40,600	<20	328	182	1,690	3,930	---	---	---
	6/22/99	Sheen	4.91	7.70	15,000	54,800	109	203	244	1,530	3,790	---	---	---
	9/29/99	NLPH	7.41	5.20	6,830 [#]	22,900	194	422	72.6	1,790	2,270	---	---	---
	12/21/99	NLPH	7.46	5.15	10,000	25,000	<40	580	26	1,400	1,360	---	---	---
	3/21/00	NLPH	3.57	9.04	4,400	23,000	860	690	33	1,600	3,290	---	---	---

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 >.....<
MW14	1/20/94	---	---	---	---	---	---	---	---	---	---	---	---	---
(15.18)	02/02-03/94	Not Accessible												
	3/10/94	NLPH	7.84	7.34	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	8.00	7.18	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	7.93	7.25	11,002	300	---	2.7	7.9	2	27	---	---	---
	6/27/94	NLPH	8.19	6.99	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	9.44	5.74	---	---	---	---	---	---	---	---	---	---
	9/29/94	NLPH	9.82	5.36	NA	300	1,600	<0.5	<0.5	0.9	1.3	---	---	---
	10/25/94	NLPH	9.99	5.19	NA	200	210	<0.5	<0.5	0.8	<0.5	---	---	---
	11/30/94	---	8.16	7.02	---	---	---	---	---	---	---	---	---	---
	12/27/94	Sheen	8.15	7.03	---	---	---	---	---	---	---	---	---	---
	2/6/95	NLPH	7.18	8.00	1,200	360	---	<1.0	<1.0	<1.0	<1.0	---	---	400
	6/7/95	NLPH	7.70	7.48	1,100	670	<2.5	<0.5	<0.5	3.6	<0.5	---	450	---
	9/18/95	NLPH	9.88	5.30	1,900	1,300	<10	<2.0	<2.0	<2.0	3	---	1,200	---
	11/1/95	NLPH	10.56	4.62	2,700	1,100	<13	<2.5	<2.5	3.2	3.1	---	1,600	---
	2/14/96	NLPH	9.08	6.10	1,500	470	<2.5	<0.5	<0.5	1.3	<0.5	ND	680	---
	6/19/96	NLPH	8.50	6.68	2,000	610	<12	<2.5	<2.5	<2.5	<2.5	ND	670	---
	9/24/96	NLPH	10.23	4.95	5,100	1,000	<25	<5.0	<5.0	<5.0	<5.0	ND	4,500	---
	12/11/96	NLPH	9.09	6.09	2,100*	1,100	<10	<2.0	<2.0	<2.0	3.3	ND	750	---
	3/19/97	NLPH	7.99	7.19	1,400	690	<2.5	0.65	1.7	2.5	8.3	ND	470	---
	6/4/97	NLPH	9.30	5.88	1,500	730	<2.5	<1.2	<1.2	3.5	5.3	ND	590	---
	9/2/97	NLPH	9.92	5.26	1,900	910	<5.0	<5.0	<5.0	<5.0	5.9	ND	1,300	---
	12/2/97	NLPH	9.13	6.05	1,200	570	<2.5	0.85	<0.5	<0.5	1.7	---	---	---
	3/24/98	NLPH	8.52	6.66	1,300	650	5.7	1.7	<1.0	<1.0	2.3	---	---	---
	6/23/98	NLPH	8.69	6.49	1,100	470	<2.5	<0.5	1.5	1.1	3.0	---	---	---
	9/29/98	NLPH	9.41	5.77	930	570	<2.5	<0.50	<0.50	2.5	3.5	---	---	---
	12/30/98	NLPH	9.31	5.87	2,000	420	<2.5	<0.5	<0.5	<0.5	2.8	---	---	---
	3/24/99	NLPH	4.23	10.95	936	456	<2.0	<0.5	<0.5	0.685	<0.5	---	---	---
	6/22/99	NLPH	7.24	7.94	1,720	403	<2.0	<0.5	<0.5	<0.5	<0.5	---	---	---
	9/29/99	NLPH	9.41	5.77	927 ^F	388	<2.5	1.31	<0.5	0.864	2.07	---	---	---
	12/21/99	NLPH	8.93	6.25	1,400	420	<2	0.61	<0.5	<0.5	6.3	---	---	---
	3/21/00	NLPH	5.76	9.42	---	390	<2	1.4	<0.5	0.82	4.5	---	---	---

TABLE I
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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Well ID # (TOC)	Sampling Date	SUBJ <.....	DTW feet.....>	Elev. <.....	TEPHd >	TPPHg <.....	MTBE >	B <.....	T ug/l.....>	E <.....	X >	VOCs	EHCss	TOG
MW15	1/20/94	NLPH	7.48	6.25	---	---	---	---	---	---	---	---	---	---
(13.73)	02/02-03/94	NLPH	7.30	6.43	1,200	4,300	---	24	6.7	170	26	---	---	---
	3/10/94	NLPH	7.32	6.41	---	---	---	---	---	---	---	---	---	---
	4/22/94	NLPH	6.67	7.06	---	---	---	---	---	---	---	---	---	---
	05/10-11/94	NLPH	5.81	7.92	1,400	3,900	---	16	<0.5	150	13	---	---	---
	6/27/94	NLPH	6.14	7.59	---	---	---	---	---	---	---	---	---	---
	8/31/94	NLPH	7.20	6.53	---	---	---	---	---	---	---	---	---	---
	9/29/94	NLPH	7.76	5.97	420	2,500	---	51	15	48	3.6	---	---	---
	10/25/94	Sheen	8.19	5.54	---	---	---	---	---	---	---	---	---	---
	11/30/94	---	8.57	5.16	---	---	---	---	---	---	---	---	---	---
	12/27/94	NLPH	6.49	7.24	---	---	---	---	---	---	---	---	---	---
	2/6/95	Sheen	4.97	8.76	---	---	---	---	---	---	---	---	---	---
	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	---	---	---
	9/29/99	NLPH	7.08	6.65	306 ^e	316	<5.0	1.44	7.51	1.60	3.21	---	---	---
	12/21/99	NLPH	7.51	6.22	300	1,500	21	21	1.6	0.67	5.9	---	---	---
	3/21/00	NLPH	3.61	10.12	220	680	<2	10	<0.5	<0.5	4.5	---	---	---

TABLE 1
 CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
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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 8021B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA method 8021B.
VOCs	=	Volatile organic compounds/purgeable halocarbons analyzed using EPA method 601.
TOG	=	Total oil and grease analyzed using Standard Method 5520.
EHCs	=	Extractable Hydrocarbons as Stoddard Solvent analyzed using EPA method 8015.
---	=	Not measured/not analyzed.
<	=	Less than the indicated detection limit shown by the laboratory.
*	=	TEPH note: Analyst notes samples resemble paint thinner more than Stoddard Solvent.
a	=	A peak eluting earlier than benzene and suspected to be methyl tertiary butyl ether was present.
b	=	Sample containers for TPPHg, BTEX, and MTBE were broken in transit.
c	=	Chromatogram pattern: unidentified hydrocarbons C6 - C12.
d	=	Chromatogram pattern: weathered gasoline C6 - C12.
e	=	Chromatogram pattern: weathered gasoline C6 - C12 and unidentified hydrocarbons C6 - C12.
f	=	Chromatogram pattern: weathered diesel C9 - C24 and unidentified hydrocarbons C9 - C36.
g	=	Chromatogram pattern: unidentified hydrocarbons C9 - C24.
h	=	Total extractable petroleum hydrocarbons as diesel analyzed using EPA method 3510/8015 (modified), with silica gel cleanup.
j	=	Well inaccessible.

TABLE 2
 CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
 SOIL VAPOR EXTRACTION SYSTEM
 Former Exxon Service Station 7-3006
 720 High Street
 Oakland, California
 (Page 1 of 9)

DATE	SAMPLE ID	Field Measurements				Laboratory Analytical Results		TPPHg Removal		Benzene Removal		Benzene Emitted per Day pounds
		TEMP F	PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds	
1/9/95	A-INF	70		160			210	39				
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				
1/10/95	A-INF	70		160			110	22	2.30	2.3	0.438	0.44
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/11/95	A-INF	70		160			70	12	1.29	3.6	0.244	0.68
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/12/95	A-INF	70		160			< 10	< 0.1	< 0.57	4.2	< 0.087	< 0.77
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/13/95	A-INF	70		160			< 10	< 0.1	< 0.14	4.3	< 0.001	< 0.77
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/14/95	A-INF	70		160			< 10	< 0.1	< 0.14	4.5	< 0.001	< 0.77
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/15/95	A-INF	70		158			< 10	< 0.1	< 0.14	4.6	< 0.001	< 0.77
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/16/95	A-INF	70		151			< 10	< 0.1	< 0.14	4.7	< 0.001	< 0.77
	A-INT						10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/17/95	A-INF	70		155			< 10	0.13	< 0.14	4.9	0.002	< 0.78
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/18/95	A-INF	70		155			100	12	0.77	5.6	0.084	< 0.86
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0014
1/19/95		70		155	15	0	68		1.17	6.8		
1/20/95		70		155	14.4	0	66		0.93	7.7		
2/1/95	A-INF	70		147			39	3.5	13.19	20.9	1.471	< 2.33
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0013
2/14/95		70		147								
2/17/95		70		155	9	0	41		8.67	29.6		
2/27/95		70		151								
3/13/95	A-INF	70		176			< 10	0.42	< 14.21	43.8	1.137	< 3.47
	A-INT						< 10	< 0.1				
	A-EFF						< 10	< 0.1				< 0.0016
3/31/95		70		116	2.3	0	10		2.01	45.8		

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	Field Measurements				Laboratory Analytical Results		TPPHg Removal		Benzene Removal		Benzene	
		TEMP F	PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF ppmv	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds	Cumulative Pounds	Emitted per Day pounds
4/4/95		70		84	129	0.8	587		76.68	122.5			
4/12/95	A-INF	70		176			95	6.4	24.88	147.4	1.616	< 5.08	
	A-INT						< 10	0.38					
	A-EFF						< 10	< 0.1					< 0.0016
4/19/95	A-INF	70		109			210	7.6	13.65	161.0	0.627	< 5.71	
	A-INT						47	12					
	A-EFF						< 10	< 0.1					< 0.0010
4/20/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of Carbon												
4/26/95	A-INF	70		84			400	9.1	18.49	179.5	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	3.5	52.68	232.2	1.229	< 7.58	
	A-INT						< 10	< 0.1					
	A-EFF						< 10	< 0.1					< 0.0009
6/6/95	A-INF	70		178			36	0.22	20.12	252.3	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	4.9	62.10	314.4	0.668	< 8.78	
	A-INT						< 10	< 0.1					
	A-EFF						< 10	< 0.1					< 0.0015
7/3/95	A-BFF						< 10	< 0.1					
7/10/95	Replaced one 500 lb carbon canister												
7/10/95	A-INF	70		168			230	2.8	64.89	379.3	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	< 0.5	37.29	416.6	< 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												

TABLE 2
 CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
 SOIL VAPOR EXTRACTION SYSTEM
 Former Exxon Service Station 7-3006
 720 High Street
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DATE	SAMPLE ID	Field Measurements				Laboratory Analytical Results		TPPHg Removal		Benzene Removal		Benzene Emitted per Day pounds	
		TEMP F	PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds		Cumulative Pounds
7/31/95	A-INF	70		164			500	14	18.78	435.4	< 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	13	196.08	631.5	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												
10/13/95	A-INF	70		168			2000	100	444.04	1,075.5	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													
11/20/95	Replaced 2 ea x 500 lb canisters = 1000 lbs of carbon												
11/20/95	A-INF1	70		170			180	3.6	176.60	1,521.8	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	84		12.03	1,533.8			
	A-INT						4600	50	469.45	2,003.3	10.105	< 41.98	
	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, #3 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	< 0.1	7.50	2,524.5	< 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	0.16	< 0.49	2,562.3	0.049	< 42.03	
	A-EFF						< 10	< 0.1					< 0.0013

TABLE 2
 CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
 SOIL VAPOR EXTRACTION SYSTEM
 Former Exxon Service Station 7-3006
 720 High Street
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DATE	SAMPLE ID	Field Measurements				Laboratory Analytical Results			TPPHg Removal		Benzene Removal		Benzene Emitted per Day pounds
		TEMP F	PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds	Cumulative Pounds	
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	< 0.1	< 1.25	2,564.8	< 0.045	< 42.07	
	A-EFF						< 10	< 0.1					< 0.0012
3/25/96	A-INF	70		147	2.4	0	< 10	< 0.1	< 1.65	2,566.4	< 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	< 0.1	21.73	2,642.4	< 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	< 1	138.22	2,915.6	< 0.235	< 43.00	
	A-EFF						< 10	< 0.1					< 0.0016
10/9/96				176	173	4.5	732		96.31	3,011.9			
10/14/96				184.8	105	4.4	444		47.63	3,059.6			
10/21/96				176	89.2	4.5	378		46.58	3,106.1			
10/30/96				176	58.3	0.7	247		44.38	3,150.5			
11/6/96	System down, unable to restart due to reset failure												
1/17/97	Replaced Thermalcouple, restarted unit												
1/31/97	A-INF			44			< 10	0.14	0.55	3,151.1	0.008	< 43.01	
	A-EFF						< 10	< 0.05					< 0.0002
2/6/97	A-INF			176			86	2.2	2.84	3,153.9	0.069	< 43.08	
	A-EFF						< 10	< 0.10					< 0.0016
2/14/97				176	25	2	106		12.12	3,166.0			
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	< 0.10	17.15	3,248.7	< 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	4.0	94.55	3,343.3	< 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	4.8	170.41	3,513.7	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						

TABLE 2
 CUMULATIVE HYDROCARBON REMOVAL AND EMISSIONS FOR
 SOIL VAPOR EXTRACTION SYSTEM
 Former Exxon Service Station 7-3006
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DATE	SAMPLE ID	TEMP F	Field Measurements				Laboratory Analytical Results		TPPHg Removal		Benzene Removal		Benzene Emitted per Day pounds
			PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds	Cumulative Pounds	
5/28/97				176	42	0	178						
6/4/97	A-INF			176			360	2.9	156.76	3,670.4	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	5.4	153.11	3,823.5	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	< 0.50	159.53	3,983.1	< 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	< 1.0	128.39	4,111.5	< 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	3.1	157.59	4,269.1	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	< 0.10	298.58	4,567.6	< 0.885	< 55.20	
	A-EFF						< 10	< 0.10					< 0.0016
11/20/97				158.4	33	3.2	138						
11/25/97				123.2	56	3.0	237						
12/3/97	A-INF			220			NA	NA			NA	NA	
	A-EFF						< 10	< 0.10					< 0.0020
12/10/97				176	19	0.5	80						
12/17/97				193.6	16	0.6	68						
12/23/97				193.6	13	0.0	55						
12/29/97	A-INF			176			51	< 0.10	345.64	4,913.3	< 0.074	< 55.27	
	A-EFF						< 10	< 0.10					< 0.0016

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	Field Measurements				Laboratory Analytical Results		TPPHg Removal		Benzene Removal		Benzene Emitted per Day pounds	
		TEMP F	PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds		Cumulative Pounds
1/6/98	A-INF			176			70	2.1	7.65	4,920.9	< 0.139	< 55.41	
	A-EFF						< 10	< 0.1					< 0.0016
1/13/98				211.2	6	1.0	25						
1/20/98				184.8	4	1.3	17						
2/3/98	System down due to chart recorder problem												
2/10/98	Restart system												
2/10/98	A-INF			132			< 10	1.1	< 15.48	< 4,936.4	0.619	< 56.03	
	A-EFF						< 10	< 0.1					< 0.0012
2/18/98				132.15	0.5	0.0							
2/23/98				158.4	0.6	0.1							
3/11/98	A-INF			193.6			< 10	1.5	< 4.24	< 4,940.6	0.551	< 56.58	
	A-EFF						< 10	< 0.1					< 0.0017
3/17/98				167.2	1.6	3.4							
3/20/98	System down due to control fault												
3/23/98	Restart system												
3/23/98				176	6.2	1.9							
3/30/98				167.2	0.4	0.8							
4/7/98				176	1.4	1.1							
4/17/98				123.2	1.4	1.7							
4/21/98	A-INF			88			10	0.26	< 5.18	< 4,945.8	0.456	< 57.04	
	A-EFF						< 10	< 0.1					< 0.0008
4/28/98				88	2.3	1.6							
5/12/98	A-INF			88			< 10	< 0.1	< 1.66	< 4,947.5	< 0.032	< 57.07	
	A-EFF						< 10	< 0.1					< 0.0008
5/19/98				88	1.8	1.2							
5/28/98				88	1.7	1.2							
6/2/98	A-INF			88	4.3	2.1	18	< 0.1	< 2.32	< 4,949.8	< 0.017	< 57.08	
	A-EFF						< 10	< 0.1					< 0.0008
6/9/98				88	1.9	1.1							
6/17/98				96.8	1.7	0.9							
6/24/98				96.8	2.1	0.8							
7/8/98	A-INF			96.8	3.4	0.8	< 10	< 0.1	< 4.18	< 4,954.0	< 0.030	< 57.11	
	A-EFF						< 10	< 0.1					< 0.0009
7/14/98	A-INF			132	3.1	0.0	39	0.91	< 1.51	< 4,955.5	< 0.031	< 57.15	
	A-EFF						< 10	< 0.1					< 0.0012
7/14/98	Shut down vapor extraction system upon departure. One process blower not operating												
7/16/98	System Inspection, vapor extraction system still down.												
7/21/98	System down on arrival due to blown process blower fuse. Restarted system												
7/21/98				46.2	2.5	1.1							
7/27/98	System operated for 11 hours prior to samples being collected.												

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	Field Measurements				Laboratory Analytical Results		TPPHg Removal		Benzene Removal		Benzene Emitted per Day pounds	
		TEMP F	PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds		Cumulative Pounds
7/27/98	A-INF A-EFF			176	0.3	0.1	13 < 10	< 0.10 < 0.10	< 0.16	< 4,955.7	< 0.003	< 57.15	< 0.0016
8/5/98	System down on arrival due to combustion blower problems. System ran for one hour. Restarted system												
8/5/98	A-INF A-EFF			184.8	4.1	0.0	90 < 10	2.50 < 0.1	0.02	< 4,955.7	< 0.001	< 57.15	< 0.0017
8/11/98	A-INF			193.6	2.7	0.3							
8/18/98	A-INF			202.4	3.1	0.3							
8/25/98	A-INF			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 A-EFF			184.8	4.4	0.2	68 < 10	1.00 < 0.10	20.97	< 4,976.6	0.464	< 57.61	< 0.0017
9/8/98	A-INF			202.4	1.8	0.2							
9/22/98	System down upon arrival due to low gas pressure control fault. System down 14 days												
9/22/98	A-INF				2.7	0.3							
9/29/98	A-INF			176	20.4	1.8							
10/6/98	A-INF A-EFF			202.4	13.0	1.3	56 < 10	1.70 < 0.10	20.38	< 4,997.0	0.444	< 58.06	0.0018
	System down upon arrival due to propane tank running empty. System down for 115.5 hours.												
10/15/98	A-INF			191.84	1.1	0.2							
10/20/98	A-INF			193.6	78.6	0.3							
10/27/98	A-INF			193.6	219.0	6.2							
11/4/98	A-INF A-EFF			193.6	42.1	3.3	150 < 10	5.00 < 0.10	44.30	< 5,041.3	1.727	< 59.78	0.0017
11/12/98	A-INF			184.8	32.4	3.7							
11/17/98	A-INF			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 A-EFF			184.8	10.0	0.6	Bag flat < 10	< 0.10					
12/16/98	A-INF			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 A-EFF			281.6	61.6	2.8	63 < 10	0.15 < 0.1	< 47.70	< 5,089.0	< 1.153	< 60.94	< 0.0025
1/12/99	A-INF A-EFF			264	2.8	0.0							
1/18/99	A-INF A-EFF			220	100.8	6.4							
1/26/99	A-INF A-EFF			184.8	32.0	5.6							

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	Field Measurements				Laboratory Analytical Results			TPPHg Removal		Benzene Removal		Benzene
		TEMP F	PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds	Cumulative Pounds	Emitted per Day pounds
2/4/99	A-INF			176	12.5	6.7	< 50	< 0.5	< 33.65	< 5,122.7	< 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	< 0.5	< 4.55	< 5,127.2	< 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	< 0.1	< 5.04	< 5,132.3	< 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							
	A-EFF												
5/4/99	A-INF			132	0	0							
	A-EFF												
5/13/99	A-INF			176	1.3	0	< 10	< 0.1	< 3.84	5,136.1	< 0.038	< 61.28	
	A-EFF						< 10	< 0.1					< 0.0016
5/18/99	A-INF			176	1.3	0							
	A-EFF												
5/25/99	A-INF			167.2	0	0							
	A-EFF												
6/11/99	System down upon arrival, emergency stop button was activated.												
6/11/99	A-INF			167.2	4.9	4.5							
	A-EFF												
6/17/99	System operated for 24.3 day for removal calculations.												
6/17/99	A-INF			167.2	1.3	1	< 10	< 0.1	< 3.74	5,139.9	< 0.037	< 61.32	
	A-EFF						< 10	< 0.1					< 0.0015
6/17/99	System shut down for pulsing												
6/25/99	System restarted												
6/25/99	A-INF			176	3.3	0							
	A-EFF												
6/29/99	A-INF			176	2.9	0							
	A-EFF												
7/6/99	A-INF			123.2	0	0	< 10	< 0.1	< 1.43	5,141.3	< 0.014	< 61.33	
	A-EFF						< 10	< 0.1					< 0.0011

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 F	Field Measurements			Laboratory Analytical Results		TPPHg Removal		Benzene Removal		Benzene Emitted per Day pounds	
			PRESS in H ₂ O	FLOW cfm	INF ppmv	EFF	TPPHg mg/m ³	Benzene mg/m ³	Per Period Pounds	Cumulative Pounds	Per Period Pounds		Cumulative Pounds
7/16/99	A-INF A-EFF			158.4	1.6	0.3							
7/16/99	System shut down for pulsing												
7/22/99	System restarted												
7/22/99	A-INF A-EFF			176	0	0.7							
7/28/99	A-INF A-EFF			167.2	5.4	0	15.5 < 10	< 0.1 < 0.1	< 2.66	5,143.9	< 0.018	< 61.35	< 0.0015
7/28/99	System shut down for pulsing												

Notes:

- | | |
|------------------------------------|---|
| A-INF = Air Influent | HC = Hydrocarbons measured as total purgeable petroleum hydrocarbons as gasoline analyzed using E |
| 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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Date	Total Flow gal	Average Flowrate gpd	Sample ID	Laboratory Analytical Results						TPPHg Removal		Benzene Removal	
				TPPHg ug/l	B ug/l	T ug/l	E ug/l	X ug/l	Arsenic mg/l	Per Period lbs	Cumulative lbs	Per Period lbs	Cumulative lbs
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				
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)										

TABLE 3
 OPERATION AND PERFORMANCE DATA FOR
 GROUNDWATER REMEDIATION SYSTEM
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Date	Total Flow gal	Average Flowrate gpd	Sample ID	Laboratory Analytical Results						TPPHg Removal		Benzene Removal	
				TPPHg ug/l	B ug/l	T ug/l	E ug/l	X ug/l	Arsenic mg/l	Per Period lbs	Cumulative lbs	Per Period lbs	Cumulative lbs
5/26/95	97,840	829	W-INF	680	210	16	5.8	28	NA	0.1366	0.6362	0.0251	0.1063
			W-INT	<50	0.94	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
6/6/95	Added two 55-gallon liquid phase carbon canisters in series												
6/6/95	Replaced one 55-gallon liquid phase carbon canister (leak)												
6/8/95			W-INF	2800	660	300	54	340	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
6/27/95	125,010	849	W-INF1	4500	1700	99	35	220	NA	0.5871	1.2233	0.2165	0.3228
			W-INF2	810	420	20	7.9	58	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	0.53	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/10/95	131,370	489	Replaced two 55-gallon liquid phase carbon canisters										
7/11/95	131,690	320	W-INF1	1600	530	15	<10	59	NA	0.1700	1.3933	0.0621	0.3850
			W-INF2	630	270	7.0	<5.0	25	NA				
			W-INT1	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.041				
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												

TABLE 3
 OPERATION AND PERFORMANCE DATA FOR
 GROUNDWATER REMEDIATION SYSTEM
 Former Exxon Service Station 7-3006
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Date	Total Flow gal	Average Flowrate gpd	Sample ID	Laboratory Analytical Results						TPPHg Removal		Benzene Removal	
				TPPHg ug/l	B ug/l	T ug/l	E ug/l	X ug/l	Arsenic mg/l	Per Period lbs	Cumulative lbs	Per Period lbs	Cumulative lbs
9/18/95	148,550	244	W-INF1	1900	590	33	16	120	NA	0.2462	1.6395	0.0788	0.4637
			W-INF2	490	150	7.6	3.1	30	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/20/95	System Down - hydrocarbon vapor detector shut down												
9/25/95	Restart System												
9/28/95	System Down - hydrocarbon vapor detector shut down												
10/13/95	151,380	113	W-INF1	4900	1400	310	120	480	NA	0.0803	1.7197	0.0235	0.4872
			W-INF2	780	230	49	15	72	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.0079				
Additional Analyses: ND Purgeable Volatile Organics													
10/26/95	154,143	213											
11/6/95	157,906	342											
11/20/95	159,664	126	W-INF1	630	140	<5.0	6.9	22	NA	0.1911	1.9108	0.0532	0.5404
			W-INF2	230	36	1.6	2.2	7.6	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
11/27/95	System Down												
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											

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 OPERATION AND PERFORMANCE DATA FOR
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Date	Total Flow gal	Average Flowrate gpd	Sample ID	Laboratory Analytical Results						TPPHg Removal		Benzene Removal	
				TPPHg ug/l	B ug/l	T ug/l	E ug/l	X ug/l	Arsenic mg/l	Per Period lbs	Cumulative lbs	Per Period lbs	Cumulative lbs
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				
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										

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

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 GROUNDWATER REMEDIATION SYSTEM
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Date	Total Flow gal	Average Flowrate gpd	Sample ID	Laboratory Analytical Results						TPPHg Removal		Benzene Removal	
				TPPHg ug/l	B ug/l	T ug/l	E ug/l	X ug/l	Arsenic mg/l	Per Period lbs	Cumulative lbs	Per Period lbs	Cumulative lbs
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.										
6/9/98	635,740	140											
6/17/98	642,810	884											
6/24/98	645,760	421											
7/8/98	645,800	3											
7/14/98	649,980	697	W-INF1	2700	480	<25	92	270	NA	0.9046	10.1015	0.1556	2.5331
			W-INF2	NS	NS	NS	NS	NS	NS				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/14/98	649,980	System down on departure											
7/16/98	System run manually for the East Bay Municipal Utility District Inspection, effluent split samples taken. System still down.												
7/16/98			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
7/21/98	650,180	29											
7/27/98	655,260	847											
7/27/98	System shutdown until propane can be refilled to restart the Thermttech Vac 25.												
8/5/98	Restarted system												
8/5/98	655,260	0	W-INF1	510	240	4.7	3.5	27	NA	0.0707	10.1722	0.0159	2.5490
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				

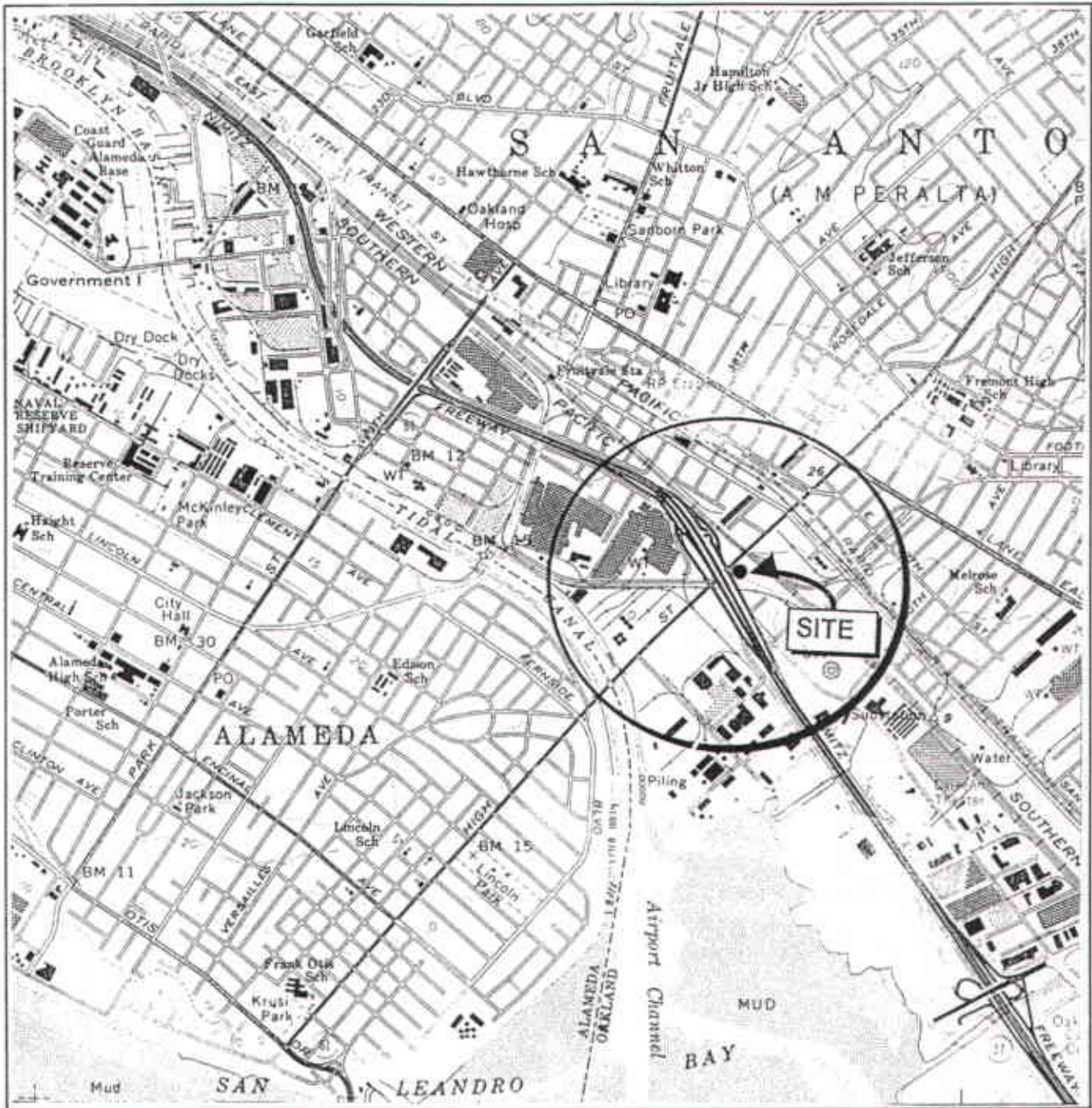
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 OPERATION AND PERFORMANCE DATA FOR
 GROUNDWATER REMEDIATION SYSTEM
 Former Exxon Service Station 7-3006
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Date	Total	Average	Sample ID	Laboratory Analytical Results						TPPHg Removal		Benzene Removal	
	Flow gal	Flowrate gpd		TPPHg ug/l	B ug/l	T ug/l	E ug/l	X ug/l	Arsenic mg/l	Per Period lbs	Cumulative lbs	Per Period lbs	Cumulative lbs
8/11/98	657,650	398											
8/18/98	662,740	727											
8/25/98	665,330	370											
9/3/98	System was down upon arrival due to low propane. System was restarted.												
9/3/98	667,700	263	W-INF1	400	110	<2.5	<2.5	9.4	NA	0.0472	10.2194	0.0182	2.5671
			W-INF2	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
9/8/98	System down upon arrival due to a failed sump pump. System was restarted.												
9/8/98	669,720	404											
9/22/98	673,870	296											
9/29/98	673,940	10											
10/6/98	676,292	336	W-INF1	990	300	<5.0	7.2	24	NA	0.0498	10.2692	0.0147	2.5818
			W-INF2	<50	0.6	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
10/15/98	679,330	336	System down until carbon change out.										
10/20/98	679,330	0	System down until carbon change out.										
10/27/98	679,520		W-INF1	1600	510	<10	10	62	NA	0.0349	10.3041	0.0109	2.5927
			W-INF2	<50	4.6	<0.5	<0.5	<0.5	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	0.19				
11/4/98	682,780	407	System shutdown on departure due to problems with the feed pump.										
11/12/98	682,810		System restarted upon departure of site.										
11/17/98			Fix problem with float in water stripper. System restarted on departure.										
11/24/98			System running on departure.										
11/24/98	687,980	430	W-INF1	420	100	3.8	2.7	3.3	NA	0.0713	10.3754	0.0215	2.6143
			W-INF2	78	3.3	8.6	<0.5	0.51	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
11/25/98			Inspection by EBMUD.										
11/25/98	688,262	646	W-EFF	<50	<.50	<.50	<.50	<.50	NA				
12/2/98	689,150	52	System down upon arrival. System restarted on departure.										

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 OPERATION AND PERFORMANCE DATA FOR
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Date	Total Flow gal	Average Flowrate gpd	Sample ID	Laboratory Analytical Results						TPPHg Removal		Benzene Removal	
				TPPHg ug/l	B ug/l	T ug/l	E ug/l	X ug/l	Arsenic mg/l	Per Period lbs	Cumulative lbs	Per Period lbs	Cumulative lbs
12/9/98	695,800		W-INF1	1500	480	19	49	120	NA	0.0626	10.4380	0.0189	2.6332
			W-INF2	310	95	3.1	3.9	32	NA				
			W-INT	<50	<0.5	<0.5	<0.5	<0.5	NA				
			W-EFF	<50	<0.5	<0.5	<0.5	<0.5	NA				
12/16/98	695,800		System down upon arrival. System restarted on departure.										
12/23/98	702,994		System down on departure, pending a permit renewal from EBMUD.										
1/6/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
1/12/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
1/18/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
1/26/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
2/4/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
2/12/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
3/18/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
3/30/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
4/9/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
4/16/99	702,994		System down on departure, pending a permit renewal from EBMUD.										
5/4/99	702,994		System down for the month of May. No Permit renewal from EBMUD.										
6/11/99	702,994		System down for the month of June. No Permit renewal from EBMUD.										
7/28/99	702,994		System shutdown pending closure.										

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



Fn 20100001



APPROXIMATE SCALE



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



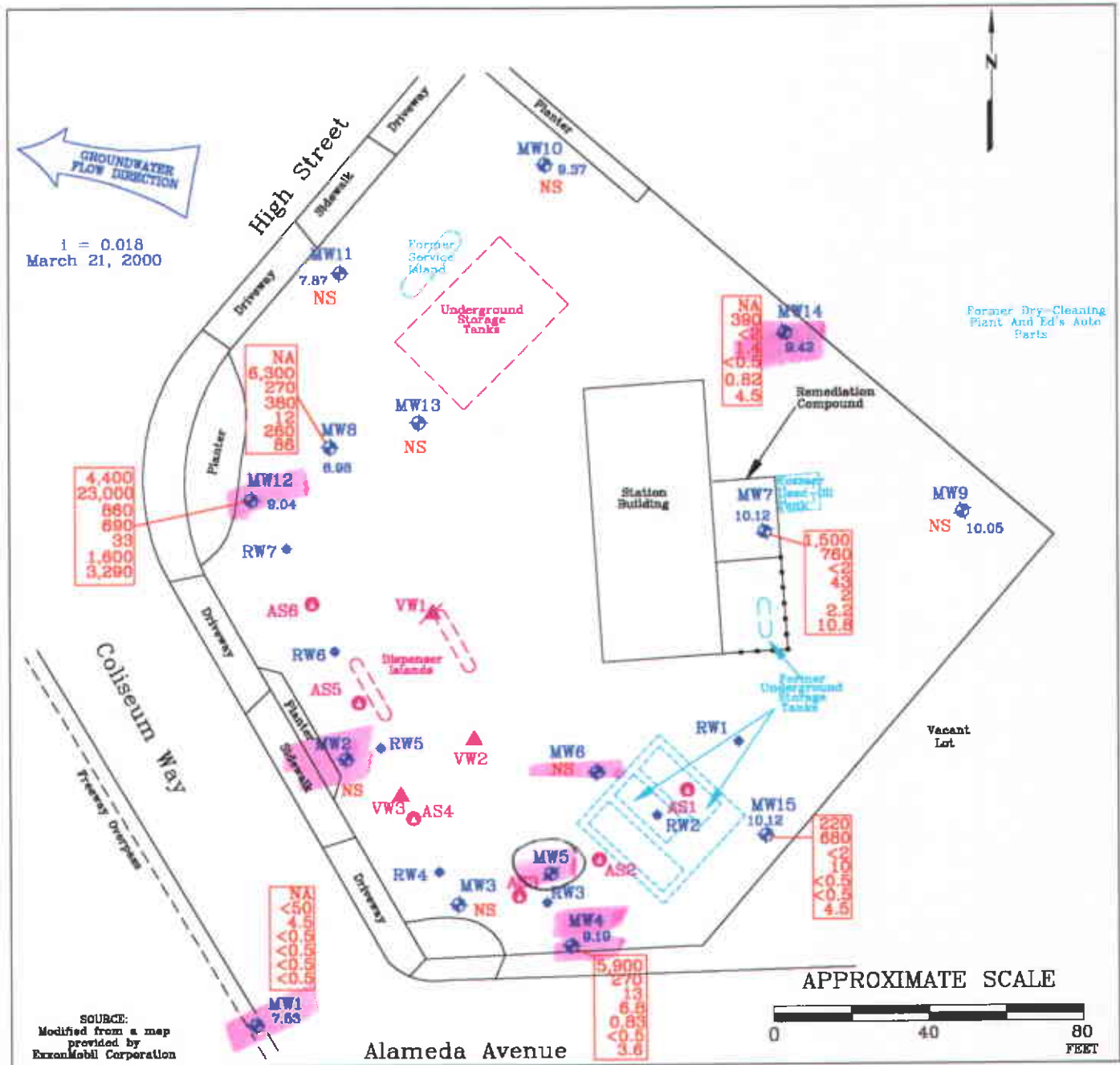
PROJECT ERI 2010

SITE VICINITY MAP

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

PLATE

1



FN 20100002

EXPLANATION

- MW15 Groundwater Monitoring Well
- 10.12 Groundwater Elevation in feet above mean sea level
- MW5 Destroyed Groundwater Monitoring Well
- RW7 Recovery Monitoring Well
- VW3 Vadose Well
- VW1 Destroyed Vadose Well
- AS6 Air Sparging/Vapor Extraction Well

Groundwater Concentrations in ug/L
Sampled March 21, 2000

4,400	Total Extractable Petroleum Hydrocarbons as diesel
23,000	Total Purgeable Petroleum Hydrocarbons as gasoline
880	Methyl Tertiary Butyl Ether
890	Benzene
33	Toluene
1,800	Ethylbenzene
3,290	Total Xylenes
<	Less Than the Stated Laboratory Detection Limit
ug/L	Micrograms per Liter
NS	Not Sampled
NA	Not Analyzed



GENERALIZED SITE PLAN

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

PROJECT NO.

2010

PLATE

2

April 19, 2000

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. Each wellcap is removed prior to gauging to allow the water level to equilibrate for at least 15 minutes.

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 store 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

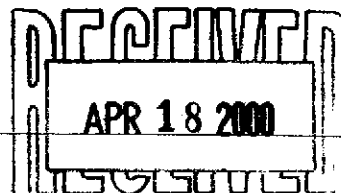
All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter GP). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual. In use the probe is placed in a cup of freshly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

ATTACHMENT B

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



HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 (713) 660-0901



Case Narrative for:
EXXON Company U.S.A.

Certificate of Analysis Number:
00030725

<p>Report To:</p> <p>Environmental Resolution, Inc. Jim Chappell 73 Digital Drive Suite 100</p> <p>Novato California 94949-</p> <p>ph: (415) 382-9105 fax: (415) 382-1856</p>	<p>Project Name: 2010</p> <p>Site: 7-3006,19908556</p> <p>Site Address: 720 High Street Oakland CA</p> <p>PO Number:</p> <p>State: California</p> <p>State Cert. No.:</p> <p>Date Reported: 4/10/00</p>
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Upon receipt of your samples it was found that your samples MW-1, MW-8, MW-14 for Diesel Range Organics were received at 22 degrees Celsius and were put on hold per your request.

Your samples for TPH Diesel Range Organics were analyzed with a Silica-Gel Clean-up.

Your sample ID "MW-4" (SPL ID: 00030725-02) was randomly selected for the use in SPL's quality control program for the Diesel Range Organics analysis by SW846 method 8015B. The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries were outside of the advisable quality control limits (Batch ID: HP_V_000403C-237770), due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Any data flags or quality control exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

Sonia West
 West, Sonia
 Senior Project Manager

4/11/00

Date



EXXON Company U.S.A.

Certificate of Analysis Number:
00030725

Report To: Environmental Resolution, Inc. Jim Chappell 73 Digital Drive Suite 100 Novato California 94949- ph: (415) 382-9105 fax: (415) 382-1856	Project Name: 2010 Site: 7-3006,19908556 Site Address: 720 High Street Oakland CA PO Number: State: California State Cert. No.: Date Reported:
From To: Environmental Resolution, Inc. Jim Chappell fax: (415) 382-1856	

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
AW-1	00030725-01	Water	3/21/00 1:35:00 PM	3/25/00 10:00:00 AM		<input type="checkbox"/>
AW-1	00030725-01	Water	3/21/00 1:35:00 PM	3/25/00 10:00:00 AM		<input checked="" type="checkbox"/>
AW-4	00030725-02	Water	3/21/00 3:53:00 PM	3/25/00 10:00:00 AM		<input type="checkbox"/>
AW-7	00030725-03	Water	3/21/00 2:25:00 PM	3/25/00 10:00:00 AM		<input type="checkbox"/>
AW-8	00030725-04	Water	3/21/00 3:10:00 PM	3/25/00 10:00:00 AM		<input type="checkbox"/>
AW-8	00030725-04	Water	3/21/00 3:10:00 PM	3/25/00 10:00:00 AM		<input checked="" type="checkbox"/>
AW-12	00030725-05	Water	3/21/00 3:22:00 PM	3/25/00 10:00:00 AM		<input type="checkbox"/>
AW-14	00030725-06	Water	3/21/00 2:44:00 PM	3/25/00 10:00:00 AM		<input type="checkbox"/>
AW-14	00030725-06	Water	3/21/00 2:44:00 PM	3/25/00 10:00:00 AM		<input checked="" type="checkbox"/>
AW-15	00030725-07	Water	3/21/00 2:00:00 PM	3/25/00 10:00:00 AM		<input type="checkbox"/>
B	00030725-08	Water	3/21/00	3/25/00 10:00:00 AM		<input type="checkbox"/>

Sonia West

4/10/00

West, Sonia
 Senior Project Manager

Date

Joel Grice
 Laboratory Director

 Ted Yen
 Quality Assurance Officer



Client Sample ID: MW-1

Collected: 3/21/00 1:35:00

SPL Sample ID: 00030725-01

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	MCL	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	CA_GRO		Units: ug/L		
Gasoline Range Organics	ND	50		1		03/29/00 19:47	WR	231175
Surr: 1,4-Difluorobenzene	88.3	% 62-144		1		03/29/00 19:47	WR	231175
Surr: 4-Bromofluorobenzene	85.4	% 44-153		1		03/29/00 19:47	WR	231175
PURGEABLE AROMATICS			MCL	SW8021B		Units: ug/L		
Benzene	ND	0.5		1		03/30/00 12:54	WR	231515
Ethylbenzene	ND	0.5		1		03/30/00 12:54	WR	231515
Methyl tert-butyl ether	4.5	2		1		03/30/00 12:54	WR	231515
Toluene	ND	0.5		1		03/30/00 12:54	WR	231515
m,p-Xylene	ND	0.5		1		03/30/00 12:54	WR	231515
o-Xylene	ND	0.5		1		03/30/00 12:54	WR	231515
Xylenes, Total	ND	0.5		1		03/30/00 12:54	WR	231515
Surr: 1,4-Difluorobenzene	95.6	% 72-137		1		03/30/00 12:54	WR	231515
Surr: 4-Bromofluorobenzene	92.5	% 48-156		1		03/30/00 12:54	WR	231515

Sonia West

West, Sonia
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
 D - Surrogate Recovery Unreportable due to Dilution



Client Sample ID: MW-4

Collected: 3/21/00 3:53:00 SPL Sample ID: 00030725-02

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: ug/L		
Diesel Range Organics	5900	250	5	S	04/05/00 11:53	RR	237768
Surr: Pentacosane	79.8 %	18-120	5		04/05/00 11:53	RR	237768

Run ID/Seq #: HP_V_000403C-237768

Prep Method	Prep Date	Prep Initials
SW3510B	03/28/2000 10:56	KL

GASOLINE RANGE ORGANICS			MCL	CA_GRO	Units: ug/L		
Gasoline Range Organics	270	50	1		03/29/00 20:11	WR	231178
Surr: 1,4-Difluorobenzene	86.6 %	62-144	1		03/29/00 20:11	WR	231178
Surr: 4-Bromofluorobenzene	146 %	44-153	1		03/29/00 20:11	WR	231178

PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	6.8	0.5	1		03/29/00 20:11	WR	231062
Ethylbenzene	ND	0.5	1		03/29/00 20:11	WR	231062
Methyl tert-butyl ether	13	2	1		03/29/00 20:11	WR	231062
Toluene	0.83	0.5	1		03/29/00 20:11	WR	231062
m,p-Xylene	1.4	0.5	1		03/29/00 20:11	WR	231062
o-Xylene	2.2	0.5	1		03/29/00 20:11	WR	231062
Xylenes, Total	3.6	0.5	1		03/29/00 20:11	WR	231062
Surr: 1,4-Difluorobenzene	96.1 %	72-137	1		03/29/00 20:11	WR	231062
Surr: 4-Bromofluorobenzene	101 %	48-156	1		03/29/00 20:11	WR	231062

Sonia West

West, Sonia
Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL



Client Sample ID: MW-7 Collected: 3/21/00 2:25:00 SPL Sample ID: 00030725-03

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: ug/L		
Diesel Range Organics	1500	50	1		04/03/00 13:42	RR	236764
Surr: Pentacosane	68.0 %	18-120	1		04/03/00 13:42	RR	236764

Run ID/Seq #: HP_V_000403C-236764

Prep Method	Prep Date	Prep Initials
SW3510B	03/28/2000 10:56	KL

GASOLINE RANGE ORGANICS			MCL	CA_GRO	Units: ug/L		
Gasoline Range Organics	760	50	1		03/30/00 13:19	WR	231538
Surr: 1,4-Difluorobenzene	122 %	62-144	1		03/30/00 13:19	WR	231538
Surr: 4-Bromofluorobenzene	144 %	44-153	1		03/30/00 13:19	WR	231538

PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	43	0.5	1		03/30/00 13:19	WR	231517
Ethylbenzene	2.2	0.5	1		03/30/00 13:19	WR	231517
Methyl tert-butyl ether	ND	2	1		03/30/00 13:19	WR	231517
Toluene	2	0.5	1		03/30/00 13:19	WR	231517
m,p-Xylene	5.4	0.5	1		03/30/00 13:19	WR	231517
o-Xylene	5.4	0.5	1		03/30/00 13:19	WR	231517
Xylenes, Total	10.8	0.5	1		03/30/00 13:19	WR	231517
Surr: 1,4-Difluorobenzene	108 %	72-137	1		03/30/00 13:19	WR	231517
Surr: 4-Bromofluorobenzene	166 %	48-156	1	*	03/30/00 13:19	WR	231517

Sonia West

West, Sonia
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL



Client Sample ID: MW-8

Collected: 3/21/00 3:10:00

SPL Sample ID: 00030725-04

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	CA_GRO	Units: ug/L		
Gasoline Range Organics	6300	500	10		03/29/00 21:02	WR	231181
Surr: 1,4-Difluorobenzene	153	% 62-144	10	*	03/29/00 21:02	WR	231181
Surr: 4-Bromofluorobenzene	150	% 44-153	10		03/29/00 21:02	WR	231181
PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	380	5	10		03/29/00 21:02	WR	231064
Ethylbenzene	260	5	10		03/29/00 21:02	WR	231064
Methyl tert-butyl ether	270	20	10		03/29/00 21:02	WR	231064
Toluene	12	5	10		03/29/00 21:02	WR	231064
m,p-Xylene	73	5	10		03/29/00 21:02	WR	231064
o-Xylene	13	5	10		03/29/00 21:02	WR	231064
Xylenes,Total	86	5	10		03/29/00 21:02	WR	231064
Surr: 1,4-Difluorobenzene	110	% 72-137	10		03/29/00 21:02	WR	231064
Surr: 4-Bromofluorobenzene	105	% 48-156	10		03/29/00 21:02	WR	231064

Sonia West

West, Sonia
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit
 B - Analyte detected in the associated Method Blank
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL

>MCL - Result Over Maximum Contamination Limit(MCL)
 D - Surrogate Recovery Unreportable due to Dilution



Client Sample ID: MW-12 Collected: 3/21/00 3:22:00 SPL Sample ID: 00030725-05

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: ug/L		
Diesel Range Organics	4400	250	5		04/03/00 15:36	RR	237939
Surr: Pentacosane	42.2	% 18-120	5		04/03/00 15:36	RR	237939

Run ID/Seq #: HP_V_000403C-237939

Prep Method	Prep Date	Prep Initials
SW3510B	03/28/2000 10:56	KL

GASOLINE RANGE ORGANICS			MCL	CA_GRO	Units: ug/L		
Gasoline Range Organics	23000	2500	50		03/29/00 21:27	WR	231185
Surr: 1,4-Difluorobenzene	92.6	% 62-144	50		03/29/00 21:27	WR	231185
Surr: 4-Bromofluorobenzene	113	% 44-153	50		03/29/00 21:27	WR	231185

PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	690	25	50		03/29/00 21:27	WR	231067
Ethylbenzene	1600	25	50		03/29/00 21:27	WR	231067
Methyl tert-butyl ether	860	100	50		03/29/00 21:27	WR	231067
Toluene	33	25	50		03/29/00 21:27	WR	231067
m,p-Xylene	2700	25	50		03/29/00 21:27	WR	231067
o-Xylene	590	25	50		03/29/00 21:27	WR	231067
Xylenes, Total	3290	25	50		03/29/00 21:27	WR	231067
Surr: 1,4-Difluorobenzene	94.6	% 72-137	50		03/29/00 21:27	WR	231067
Surr: 4-Bromofluorobenzene	103	% 48-156	50		03/29/00 21:27	WR	231067

Sonia West

West, Sonia
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL



Client Sample ID: MW-14

Collected: 3/21/00 2:44:00

SPL Sample ID: 00030725-06

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	CA_GRO	Units: ug/L		
Gasoline Range Organics	390	50	1		03/29/00 21:52	WR	231188
Surr: 1,4-Difluorobenzene	126	% 62-144	1		03/29/00 21:52	WR	231188
Surr: 4-Bromofluorobenzene	116	% 44-153	1		03/29/00 21:52	WR	231188
PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	1.4	0.5	1		03/29/00 21:52	WR	231071
Ethylbenzene	0.82	0.5	1		03/29/00 21:52	WR	231071
Methyl tert-butyl ether	ND	2	1		03/29/00 21:52	WR	231071
Toluene	ND	0.5	1		03/29/00 21:52	WR	231071
m,p-Xylene	1.7	0.5	1		03/29/00 21:52	WR	231071
o-Xylene	2.8	0.5	1		03/29/00 21:52	WR	231071
Xylenes, Total	4.5	0.5	1		03/29/00 21:52	WR	231071
Surr: 1,4-Difluorobenzene	103	% 72-137	1		03/29/00 21:52	WR	231071
Surr: 4-Bromofluorobenzene	113	% 48-156	1		03/29/00 21:52	WR	231071

Sonia West

West, Sonia
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL



Client Sample ID: MW-15

Collected: 3/21/00 2:00:00

SPL Sample ID: 00030725-07

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: ug/L		
Diesel Range Organics	220	50	1		04/03/00 15:36	RR	236766
Surr: Pentacosane	57.2 %	18-120	1		04/03/00 15:36	RR	236766

Run ID/Seq #: HP_V_000403C-236766

Prep Method	Prep Date	Prep Initials
SW3510B	03/28/2000 10:56	KL

GASOLINE RANGE ORGANICS			MCL	CA_GRO	Units: ug/L		
Gasoline Range Organics	680	50	1		03/29/00 22:17	WR	231191
Surr: 1,4-Difluorobenzene	178 %	62-144	1	*	03/29/00 22:17	WR	231191
Surr: 4-Bromofluorobenzene	126 %	44-153	1		03/29/00 22:17	WR	231191

PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	10	0.5	1		03/29/00 22:17	WR	231074
Ethylbenzene	ND	0.5	1		03/29/00 22:17	WR	231074
Methyl tert-butyl ether	ND	2	1		03/29/00 22:17	WR	231074
Toluene	ND	0.5	1		03/29/00 22:17	WR	231074
m,p-Xylene	2.4	0.5	1		03/29/00 22:17	WR	231074
o-Xylene	2.1	0.5	1		03/29/00 22:17	WR	231074
Xylenes, Total	4.5	0.5	1		03/29/00 22:17	WR	231074
Surr: 1,4-Difluorobenzene	116 %	72-137	1		03/29/00 22:17	WR	231074
Surr: 4-Bromofluorobenzene	110 %	48-156	1		03/29/00 22:17	WR	231074

Sonia West

West, Sonia
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL



Client Sample ID: TB

Collected: 3/21/00

SPL Sample ID: 00030725-08

Site: 7-3006,19908556

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS			MCL	CA GRO	Units: ug/L		
Gasoline Range Organics	ND	50	1		03/29/00 18:57	WR	231172
Surr: 1,4-Difluorobenzene	87.6	% 62-144	1		03/29/00 18:57	WR	231172
Surr: 4-Bromofluorobenzene	84.7	% 44-153	1		03/29/00 18:57	WR	231172
PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/L		
Benzene	ND	0.5	1		03/29/00 18:57	WR	231055
Ethylbenzene	ND	0.5	1		03/29/00 18:57	WR	231055
Methyl tert-butyl ether	ND	2	1		03/29/00 18:57	WR	231055
Toluene	ND	0.5	1		03/29/00 18:57	WR	231055
m,p-Xylene	ND	0.5	1		03/29/00 18:57	WR	231055
o-Xylene	ND	0.5	1		03/29/00 18:57	WR	231055
Xylenes, Total	ND	0.5	1		03/29/00 18:57	WR	231055
Surr: 1,4-Difluorobenzene	96.3	% 72-137	1		03/29/00 18:57	WR	231055
Surr: 4-Bromofluorobenzene	96.0	% 48-156	1		03/29/00 18:57	WR	231055

Sonia West

West, Sonia
 Project Manager

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits
 J - Estimated Value between MDL and PQL

Quality Control Documentation



Quality Control Report

EXXON Company U.S.A.

2010

Analysis: Diesel Range Organics
 Method: SW8015B

WorkOrder: 00030725
 Lab Batch ID: 3904A

Method Blank

Samples in Analytical Batch:

RunID: HP_V_000403C-236759 Units: mg/L
 Analysis Date: 04/03/2000 11:48 Analyst: RR
 Preparation Date: 03/28/2000 10:56 Prep By: KL Method SW3510B

Lab Sample ID	Client Sample ID
00030725-02B	MW-4
00030725-03B	MW-7
00030725-05B	MW-12
00030725-07B	MW-15

Analyte	Result	Rep Limit
Diesel Range Organics	ND	0.050
Surr: Pentacosane	66.2	18-120

Laboratory Control Sample (LCS)

RunID: HP_V_000403C-236762 Units: mg/L
 Analysis Date: 04/03/2000 11:48 Analyst: RR
 Preparation Date: 03/28/2000 10:56 Prep By: KL Method SW3510B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics	2.5	2.7	108	44	141

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 00030725-02
 RunID: HP_V_000403C-237770 Units: mg/L
 Analysis Date: 04/05/2000 12:31 Analyst: RR
 Preparation Date: 03/28/2000 10:56 Prep By: KL Method SW3510B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics	5.9	2.5	15	369*	2.5	16	393*	6.19	39	13	130

Qualifiers: ND/U - Not Detected at the Reporting Limit * - Recovery Outside Advisable QC Limits
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated value between MDL and PQL



Quality Control Report

EXXON Company U.S.A.

2010

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 00030725
Lab Batch ID: R11430

Method Blank

Samples in Analytical Batch:

RunID: HP_U_000329A-231044 Units: ug/L
Analysis Date: 03/29/2000 16:27 Analyst: WR

Lab Sample ID	Client Sample ID
00030725-01A	MW-1
00030725-02A	MW-4
00030725-03A	MW-7
00030725-04A	MW-8
00030725-05A	MW-12
00030725-06A	MW-14
00030725-07A	MW-15
00030725-08A	TB

Analyte	Result	Rep Limit
Benzene	ND	0.50
Ethylbenzene	ND	0.50
Methyl tert-butyl ether	ND	2.0
Toluene	ND	0.50
m,p-Xylene	ND	0.50
o-Xylene	ND	0.50
Xylenes, Total	ND	0.50
Surr: 1,4-Difluorobenzene	96.2	72-137
Surr: 4-Bromofluorobenzene	92.9	48-156

Laboratory Control Sample (LCS)

RunID: HP_U_000329A-231037 Units: ug/L
Analysis Date: 03/29/2000 15:37 Analyst: WR

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	50	50	99	61	119
Ethylbenzene	50	49	98	70	118
Methyl tert-butyl ether	50	47	94	72	128
Toluene	50	50	99	65	125
m,p-Xylene	100	97	97	72	116
o-Xylene	50	49	98	72	117
Xylenes, Total	150	146	97	72	117

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 00030765-02
RunID: HP_U_000329A-231049 Units: ug/L
Analysis Date: 03/29/2000 16:52 Analyst: WR

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	20	101	20	20	101	0.0288	21	32	164
Ethylbenzene	ND	20	20	98.5	20	20	98.3	0.210	19	52	142
Methyl tert-butyl ether	3800	20	3900	65.0	20	3800	-165*	460*	20	39	150
Toluene	ND	20	20	99.7	20	20	98.9	0.764	20	38	159

Qualifiers: ND/U - Not Detected at the Reporting Limit * - Recovery Outside Advisable QC Limits
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL



Quality Control Report

EXXON Company U.S.A.

2010

Analysis: Purgeable Aromatics
 Method: SW8021B

WorkOrder: 00030725
 Lab Batch ID: R11430

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 00030765-02
 RunID: HP_U_000329A-231049 Units: ug/L
 Analysis Date: 03/29/2000 16:52 Analyst: WR

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
m, p-Xylene	ND	40	39	98.5	40	39	97.5	1.05	17	53	144
o-Xylene	ND	20	19	97.3	20	19	96.5	0.887	18	53	143
Xylenes, Total	ND	60	58	96.7	60	58	96.7	0	18	53	144

Qualifiers: ND/U - Not Detected at the Reporting Limit * - Recovery Outside Advisable QC Limits
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
 J - Estimated value between MDL and PQL



Quality Control Report

EXXON Company U.S.A.

2010

Analysis: Gasoline Range Organics
Method: CA_GRO

WorkOrder: 00030725
Lab Batch ID: R11434

Method Blank

Samples in Analytical Batch:

RunID: HP_U_000329B-231163 Units: mg/L
Analysis Date: 03/29/2000 16:27 Analyst: WR

Lab Sample ID	Client Sample ID
00030725-01A	MW-1
00030725-02A	MW-4
00030725-03A	MW-7
00030725-04A	MW-8
00030725-05A	MW-12
00030725-06A	MW-14
00030725-07A	MW-15
00030725-08A	TB

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.050
Surr: 1,4-Difluorobenzene	85.3	62-144
Surr: 4-Bromofluorobenzene	89.0	44-153

Laboratory Control Sample (LCS)

RunID: HP_U_000329B-231160 Units: mg/L
Analysis Date: 03/29/2000 16:02 Analyst: WR

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1	0.85	85	64	131

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 00030725-01
RunID: HP_U_000329B-231166 Units: mg/L
Analysis Date: 03/29/2000 17:42 Analyst: WR

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	0.9	0.93	103	0.9	0.93	103	0.227	36	36	160

Qualifiers: ND/U - Not Detected at the Reporting Limit

* - Recovery Outside Advisable QC Limits

B - Analyte detected in the associated Method Blank

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

*Chain of Custody
And
Sample Receipt Checklist*

Exxon Engineer: Darin Rouse Phone: (925) 246-8768
 Consultant Co. Name: ERI Contact: Jim Chappell
 Address: 73 Digital Dr, Suite 100 Phone: (415) 382-4323
Novato, CA 94949 Fax: (415) 382-1856

RAS #: 7-3006 Facility/State ID # (TN Only): _____
 AFE # (Terminal Only): _____ Consultant Project # 2010

Location: 720 High Street (City): Oakland (State): CA
 EE C & M SDT

Consultant Work Release #: 19908556 BTS# 600321N-1
 Sampled By: Blaine Tech Services, Inc./ Print Name: Garnett Haertel

ANALYSIS REQUEST:
(CHECK APPROPRIATE BOX)

NO. OF CONTAINERS	CONTAINER SIZE	ANALYSIS REQUEST (CHECK APPROPRIATE BOX)														STATE			
		BTEX 8020	PURGEABLE HALOCARBON 8010	TPH/IR 418.1	O & G IR 413.1	TPH/GC 8015 GRO	VOL 8240	SEMI-VOL 8270	PNAPAH 8100	PCB / PEST 8080	TCLP FULL	METALS. TOTAL	LEAD. TOTAL 239.1	TOX/TOH	REACTIVITY		CORROSION	IGNITABILITY	
5	WITH MTBE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CA
5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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SAMPLE I.D.	DATE	TIME	COMP.	GRAB	MATRIX			OTHER	PRESERVATIVE
					H ₂ O	SOIL	AIR		
MW-1	3/21/00	13:35			X				HCL/NP
MW-4		15:53			X				X X
MW-7		14:25			X				X X
MW-8		15:10			X				X X
MW-12		15:22			X				X X
MW-14		14:44			X				X X
MW-15		14:00			X				X X
TB					X				X

X - not DRO analyses on TB only

TAT
 24 HR. _____ 72 HR. _____
 48 HR. _____ 96 HR. _____
 Standard * Contact US Prior to Sending Sample
 Other _____

EXXON UST
 CONTRACT NO.
 S02317M01

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:
 Run silica Gel Cleanup on all TPH-D samples

LAB USE ONLY LOT # _____ Storage Location _____

QA/QC Level
 Standard CLP Other

FAX FAX C-O-C W/ REPORT

WORK ORDER #: 00030723 LAB WORK RELEASE #: _____

CUSTODY RECORD

Relinquished By Sampler: [Signature]
 Relinquished By Sampler: _____
 Relinquished By Sampler: _____

Date 3/24/00 Time 2:00
 Date _____ Time _____
 Date _____ Time _____

Received By: _____
 Received By: _____
 Received By: Harvey Bowers 3/25/00 10:00
 Way Bill #: _____ Cooler Temp: _____



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
(713) 660-0901

Sample Receipt Checklist

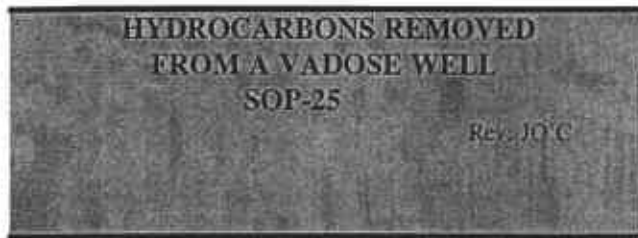
Workorder: 00030725
Date and Time Received: 3/25/00 10:00:00 AM
Temperature: 5

Received by: Barrera, Nancy
Carrier name: FedEx

-
- | | | | |
|---|---|--|---|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
-

ATTACHMENT C

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



Rev. 4/29/97

POUNDS OF HYDROCARBON IN AN VAPOR STREAM

INPUT DATA:

- 1) Vapor flow rate acfm (usually by Pitot tube)
- 2) Vapor pressure at the flow measuring device (in inches of H₂O) (use {-} for vacuum)
- 3) Vapor temperature at the flow measuring device.
- 4) Hydrocarbon content of vapor (usually in mg/M³) for ppmv you need molecular weight.
- 5) Length of time (usually hours) over which flow rate occurred)

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

ASSUMPTIONS:

- 1) Vapor flow for the period equals the average of the initial and final reading 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	Vapor flow acfm	Calc. lb. rem.
1/6/95	11:00	70	-46	2000	120	
1/7/95	13:00	55	-50	1350	90	
1/8/95	10:00	80	-13	750	100	7.4

Calculate the pounds of hydrocarbon removed from the system during the basis period from 13:00 (1:00 pm) on the 7th to 10 am on the 8th. Pressure and temperature of the measurements (at the flow meter) must be corrected to the P and T used to report the HC concentration (which are P = 1 atm and T = 70 deg F). 1 atm = 14.7psia, 760 mm Hg, or 407 in H₂O. T_{abs} = 460 + T deg F

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

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

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

21 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)